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SCRIPPS INSTITUTION OF OCEANOGRAPHY LA JOLLA CALIF
PHYSICAL AND CHEMICAL DATA. EXPEDITION X, 20-25 APR
FEB 78

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N00014-75-C-0152

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9 data report.

6 PHYSICAL AND CHEMICAL DATA.

Expedition X,
20-25 April 1965.

LA PARED Expedition,
30 April - 17 May 1965.

STUDENT TRAINING Cruise,
28 August - 6 September 1965

and

MUDDAUBER Expedition,
29 October - 16 December 1965.

11 SIO Reference 78-4
15 February 1978

12 103p.

DISTRIBUTION STATEMENT A

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319 100

14 SIO-REF-78-4

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UNIVERSITY OF CALIFORNIA
SCRIPPS INSTITUTION OF OCEANOGRAPHY

PHYSICAL AND CHEMICAL DATA

Expedition X
20-25 April 1965

Sponsored by
National Science Foundation

LA PARED Expedition
30 April - 17 May 1965

Sponsored by
Office of Naval Research

STUDENT TRAINING Cruise
28 August - 6 September 1965

Sponsored by
Department of Scripps Institution of Oceanography
University of California

and

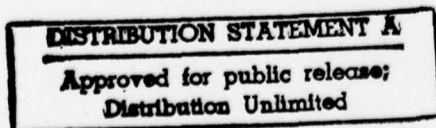
MUDDAUBER Expedition
29 October - 16 December 1965

Sponsored by
Marine Research Committee
State of California

Marine Life Research Group
Scripps Institution of Oceanography

SIO Reference 78-4

Approved for distribution:



W. A. Nierenberg
W. A. Nierenberg, Director

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INSTRUMENTAL

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INTRODUCTION

This report presents data collected during 1965 on Expedition "X", LA PARED Expedition, a STUDENT TRAINING CRUISE and MUDDAUBER Expedition.

Preceding the tabulated data for each cruise are: 1) a description of the principal objective and the sponsoring agency, 2) the hydrographic work carried out on the cruise, 3) a chart of the station positions, 4) a list of scientific personnel participating in the collection of data and 5) a list of publications utilizing the cruise data.

STANDARD PROCEDURES

Hydrographic Cast Data

Temperature was measured using paired deep-sea reversing thermometers and is reported to hundredths of a degree Celsius. Unprotected thermometers were included on most Nansen bottles lowered 100 meters or deeper, except for the shallow stations of the STUDENT CRUISE where they were included in the bottom two or three bottles of each cast.

Water samples for chemical and nutrient analysis were obtained from Nansen bottles.

Salinities were determined by two types of salinometers, three different Australian Autolabs (inductive) on Expedition X, LA PARED and the STUDENT CRUISE and a Washington bridge (conductive) on Expedition X and MUDDAUBER. The salinity values were recorded and are reported to three decimal places, provided accepted standards were met. If only one determination per sample was obtained, or there was doubt concerning the accuracy of the analytical results, the salinities are reported to two decimal places. All STD salinities are tabulated to hundredths.

Dissolved oxygen was determined by the Winkler method as modified by Carpenter (1965). Where phosphate, nitrite and nitrate data appear, the determinations were made by Beckman DU Spectrophotometer according to methods suggested by Strickland and Parsons (1968).

The observed data has been evaluated using the method described by Klein (1973). This involves consideration of their variation as functions of density or depth and their relations to each other and comparison with adjacent observations.

In situ Salinity/Temperature/Depth Recorder (STD) Data

With the exception of Expedition X, an STD was used on all cruises included in this report.* However, the 227 analog recordings made on LA PARED Expedition were not processed by the Data Collection and

* Original STD analogs are on file in SIO data archives.

Processing Group. The STUDENT TRAINING CRUISE and MUDDAUBER Expedition include STD data digitized at standard depths from the analog recordings.

TABULATED DATA

The data presented in this report was obtained by Nansen bottle casts and by the STD and appears in two forms:

1. Data from the sample bottle casts is tabulated with the observed levels of depth on the left of a page and standard depth values of temperature and oxygen interpolated from these observations on the right.
2. For each STD lowering, temperature and salinity values are read only at standard levels of depth and appear with computed values of DT and DD (see below) on the right of the page. Corrections may have been applied to the temperature and salinity values as discussed later in this report.

The time reported for bottle casts is the time of messenger release. When a station consists of more than one cast, the messenger times for the first and last casts are given. Multiple casts are indicated by a letter following all observed depths except the cast with the shallowest depth. For STD lowerings the time given is the "start down" time.

The bottom depth, listed in meters, was determined by applying corrections from Matthews (1939) tables to echo soundings.

The weather and dominant waves were coded using the National Oceanographic Data Center (NODC) recommended conversions.

The column headings from the computer are explained as follows:

Z	Depth	meters
T	Temperature	°C
S	Salinity	‰
O2	Dissolved oxygen	ml/L
PO4	"Reactive" inorganic phosphate-phosphorus	µg at/L
SiO3	"Reactive" inorganic silicate-silicon	µg at/L
NO2	"Reactive" nitrite-nitrogen	µg at/L
NO3	"Reactive" nitrate-nitrogen	µg at/L
DT	δT Thermosteric anomaly	cl/ton
SIGT	$\sigma_t = (\rho_{s,t,0} - 1) 10^3$ where $\rho_{s,t,0}$ is the density the parcel would have if moved isothermally to the sea surface.	g/L
DD	Geopotential anomaly, referred to the sea surface.	dyn. meters

FOOTNOTES

Data which appears to be in error without obvious reason is reported, but flagged uncertain with a U. Such data was not used in the determination of values at standard depths. Footnotes are used to indicate data which has required special processing.

EXPEDITION X

Expedition X, supported by a grant from the National Science Foundation, was planned for the insular, basin and coastal waters of southern California during the period of spring upwelling. It was an investigation of the local onshore-offshore occurrence of zooplankton.

Most of the Nansen bottle casts consisted of 18 bottles lowered to approximately 600 meters. The bathythermograph traces were used to influence the drawing of the property curves.

Salinity was determined about three weeks after collection, using both conductive and inductive salinometers. Many samples were questionable because of "chipped tops" on the bottles. These values are footnoted.

Personnel participating in the collection of data were:

Ship's Captain:

Davis, Laurence E.
RV Alexander Agassiz

Scientific personnel:

Brinton, Dr. E. (Chief scientist)
Bonner, P. H.
Davoll, P. J.
Ferreira, S. M.
Jerde, C. E.
Matsui, T.
Netzley, R. L.
Pine, J. S.
Venrick, E. L.

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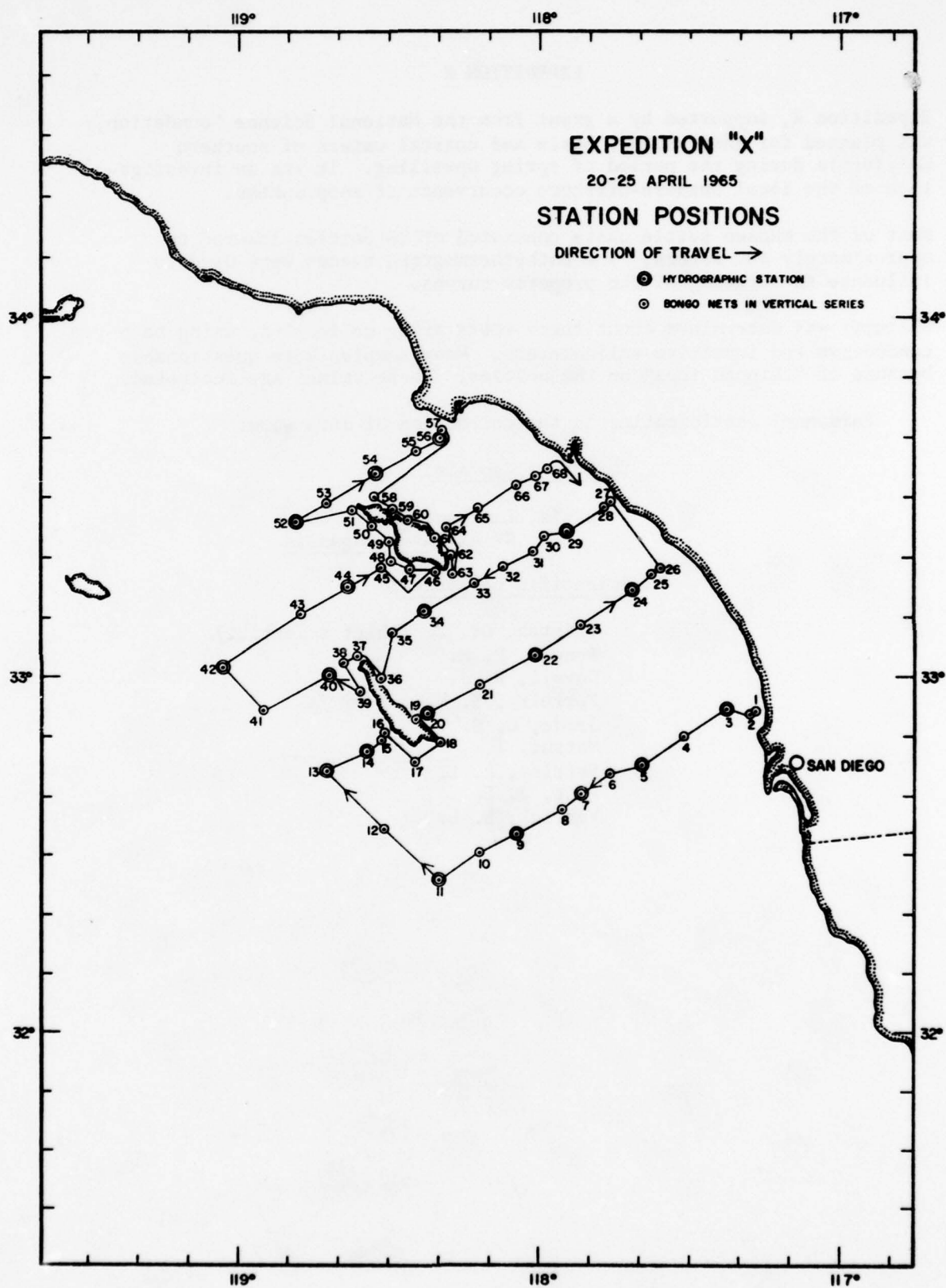


FIGURE 1

RV ALEXANDER AGASSIZ

EXPEDITION X

(93.28) 3

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
32 54.8N		117 22.6W		04/20/65		0440		GMT	501M	090	05KT	0	290 02 10		
Z	T	S	O2	PO4	SI03	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	17.28	33.42	A					367.4	0	17.28	33.420	6.08	24.257	367.4	0
10	15.04	33.423						318.7	10	15.04	33.423	6.42	24.769	318.7	.034
30	12.18	33.495						257.9	20	14.00	33.440	5.90	25.003	296.4	.065
44	11.08	33.585						231.9	30	12.18	33.495	4.82	25.407	257.9	.093
54	10.66	33.649						220.1	50	10.81	33.624	4.08	25.759	224.5	.141
69	10.12	33.763						202.8	75	10.01	33.792	3.46	26.028	198.9	.195
83	9.89	33.821						194.8	100	9.61	33.887	3.10	26.169	185.6	.243
98	9.63	33.876						186.7	125	9.34	34.011	2.62	26.310	172.2	.288
124	9.36	34.007						172.7	150	9.01	34.090	2.31	26.424	161.3	.331
144	9.02	34.073						162.6	200	8.86	34.151	1.92	26.496	154.5	.411
173	8.98	34.120						158.6	250	8.63	34.193	1.63	26.564	148.0	.489
202	8.85	34.153						154.2	300	8.26	34.205	1.41	26.632	141.6	.564
235	8.72								400	7.28	34.279	.90	26.833	122.5	.702
288	8.36	34.203						143.2							
341	7.88	34.218						135.3							
400	7.28	34.279						122.5							

RV ALEXANDER AGASSIZ

EXPEDITION X

(93.32) 5

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
32 45.2N		117 39.5W		04/20/65		0837		GMT	1055M	300	08KT	0	310 02 12		
Z	T	S	O2	PO4	SI03	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	16.89	33.479	5.97					354.4	0	16.89	33.479	5.97	24.394	354.4	0
10	15.70	33.490	6.13					327.6	10	15.70	33.490	6.13	24.675	327.6	.034
30	13.05	33.485	5.67					274.7	20	14.45	33.486	5.98	24.944	302.0	.066
40	11.91	33.497	5.12					252.9	30	13.05	33.485	5.67	25.230	274.7	.095
50	11.58	33.514	4.96					245.8	50	11.58	33.514	4.96	25.534	245.8	.147
65	10.71	33.601	4.41					224.5	75	10.48	33.656	4.12	25.842	216.6	.205
80	10.36	33.683	3.95					212.7	100	9.78	33.813	3.46	26.083	193.7	.257
100	9.78	33.813	3.46					193.7	125	9.44	33.947	3.01	26.244	178.4	.304
125	9.44	33.947	3.01					178.4	150	9.14	34.030	2.73	26.358	167.6	.348
145	9.18	34.012	2.84					169.6	200	8.87	34.124	2.16	26.474	156.6	.430
175	8.98	34.103	2.20					159.8	250	8.47	34.214	1.66	26.607	144.0	.508
205	8.84	34.127	2.15					155.9	300	8.35	34.254	1.21	26.657	139.2	.581
235	8.46	34.187	1.85					145.9	400	7.43	34.250	1.03	26.789	126.7	.720
275	8.48	34.238	1.36					142.4	500	6.56	34.280	.60	26.933	113.1	.847
334	8.07	34.263	1.12					134.6							
409	7.34	34.248	1.02					125.6							
484	6.68	34.273	.65					115.1							
564	6.14	34.310	.50					105.6							

RV ALEXANDER AGASSIZ

EXPEDITION X

(93.35) 7

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
32 40.5N		117 51.4W		04/20/65		1605		GMT	648M	300	08KT	1	280 03 10		
Z	T	S	O2	PO4	SI03	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	16.34	33.521	5.86					339.2	0	16.34	33.521	5.86	24.554	339.2	0
10	15.43	33.534	6.02					318.7	10	15.43	33.534	6.02	24.769	318.7	.033
30	14.39	33.538	6.03					297.0	20	15.20	33.530	6.03	24.816	314.2	.065
41	12.64	33.541	5.22					262.9	30	14.39	33.538	6.03	24.997	297.0	.095
50	12.12	33.587	4.66					250.1	50	12.12	33.587	4.66	25.490	250.1	.150
64	11.22	33.639	4.36					230.4	75	10.76	33.653	4.14	25.790	221.5	.209
80	10.59	33.658	4.06					218.3	100	9.96	33.746	3.91	26.001	201.5	.263
100	9.96	33.746	3.91					201.5	125	9.47	33.901	3.34	26.203	182.3	.311
125	9.47	33.901	3.34					182.3	150	8.99	34.023	2.79	26.375	166.0	.356
144	9.09	34.005	2.89					168.8	200	8.31	34.067	2.31	26.515	152.7	.437
174	8.66	34.059	2.52					158.3	250	8.21	34.175	1.61	26.615	143.2	.513
204	8.27	34.068	2.28					151.9	300	8.11	34.245	1.05	26.686	136.4	.585
234	8.16	34.138	1.87					145.2	400	7.44	34.275	.73	26.808	124.9	.722
273	8.28	34.219	1.27					140.9	500	6.65	34.277	.58	26.918	114.5	.848
333	7.80	34.260	.91					131.0							
407	7.40	34.275	.72					124.4							
482	6.80	34.272	.618					116.7							
561	6.15	34.311	.448					105.7							

A) POSSIBLE EVAPORATION. THE VALUE WAS ACCEPTED FOR INTERPOLATION AT STANDARD LEVELS OF DEPTH.
 B) OXYGEN SAMPLES AT 482 AND 561 METERS APPEAR TO HAVE BEEN REVERSED. THEY ARE ASSUMED TO BE IN THE CORRECT ORDER.

RV ALEXANDER AGASSIZ

EXPEDITION X

(93.38) 9

LATITUDE 32 33.6N				LONGITUDE 118 04.7W				MO/DAY/YR 04/20/65				MESSENGER TIME 2026				BOTTOM 1812M	WIND 300	SPEED 08KT	WEATHER 1	DOMINANT WAVES 290 03 10			
Z	T	S	OZ	PO4	SI03	NO2	NO3	DT	Z	T	S	OZ	SIGT	DT	DO								
0	16.18	33.459	6.01					340.2	0	16.18	33.459	6.01	24.543	340.2	0								
8	15.40	33.456	6.12					323.8	10	15.20	33.458	6.16	24.761	319.4	.033								
25	14.56	33.449	6.29					307.0	20	14.90	33.456	6.21	24.824	313.4	.065								
34	13.78	33.425	6.34					293.2	30	14.12	33.434	6.32	24.974	299.2	.095								
47	13.34	33.465	5.87					281.7	50	13.15	33.466	5.74	25.196	278.0	.153								
59	12.34	33.470	5.38					262.7	75	11.52	33.516	4.79	25.547	244.7	.219								
80	11.38	33.535	4.63					240.8	100	11.03	33.619	4.22	25.716	228.6	.279								
98	11.04	33.605	4.24					229.8	125	10.16	33.798	3.34	26.007	200.9	.333								
113	10.48	33.717	3.68					212.1	150	9.70	33.952	2.83	26.205	182.1	.382								
128	10.10	33.817	3.27					198.5	200	8.88	34.099	2.36	26.452	158.6	.468								
151	9.68	33.957	2.82					181.4	250	8.66	34.181	1.74	26.551	149.3	.547								
177	9.20	34.007	2.69					170.3	300	7.88	34.178	1.49	26.666	138.3	.622								
199	8.88	34.095	2.38					158.9	400	7.16	34.275	.72	26.847	121.2	.757								
237	8.88	34.185	1.81					152.2	500	6.37	34.307	.50	26.980	108.6	.879								
281	8.05	34.159	1.64					142.0															
351	7.60	34.244	1.03					129.4															
425	6.93	34.285	.60					117.4															
507	6.32	34.308	.49					108.0															

RV ALEXANDER AGASSIZ

EXPEDITION X

(93.42) 11

LATITUDE 32 25.8N				LONGITUDE 118 20.3W				MO/DAY/YR 04/21/65				MESSENGER TIME 0228				BOTTOM 1129M	WIND 310	SPEED 19KT	WEATHER 1	DOMINANT WAVES 320 03 06			
Z	T	S	OZ	PO4	SI03	NO2	NO3	DT	Z	T	S	OZ	SIGT	DT	DO								
1	15.86	33.498	5.87					330.5	0	15.86	33.498	5.87	24.645	330.5	0								
8	15.83	33.463	5.94					332.4	10	15.82	33.460	5.99	24.625	332.4	.033								
22	15.10	33.452	6.26					317.8	20	15.25	33.453	6.23	24.747	320.8	.066								
29	14.86	33.444	6.24					313.4	30	14.85	33.445	6.23	24.826	313.3	.098								
40	14.74	33.447	6.17					310.8	50	14.18	33.436	6.21	24.962	300.3	.159								
50	14.18	33.436	6.21					300.3	75	12.60	33.470	5.43	25.307	267.4	.231								
67	13.44	33.452	6.01					284.6	100	11.59	33.519	4.59	25.536	245.7	.295								
80	12.46	33.477	5.36					264.3	125	10.37	33.648	3.69	25.854	215.4	.353								
91	11.90	33.500	5.03					252.5	150	9.80	33.825	3.06	26.089	193.1	.405								
104	11.46	33.529	4.39					242.6	200	9.08	34.059	2.23	26.389	164.6	.496								
120	10.62	33.604	3.77					222.8	250	8.56	34.098	1.80	26.502	153.9	.578								
140	9.82	33.776	3.46					197.1	300	7.89	34.137	1.41	26.634	141.4	.654								
157	9.78	33.845	2.77					191.3	400	6.98		.90											
186	9.28	34.037	2.38					169.3															
220	8.84	34.061	2.05					160.8															
272	8.34	34.125	1.63					148.7															
331	7.40	34.166	1.19					132.5															
402	6.98		.90																				

RV ALEXANDER AGASSIZ

EXPEDITION X

(91.44) 13

LATITUDE 32 44.2N				LONGITUDE 118 42.2W				MO/DAY/YR 04/21/65				MESSENGER TIME 0849				BOTTOM 1036M	WIND 310	SPEED 19KT	WEATHER 2	DOMINANT WAVES 320 06 07			
Z	T	S	OZ	PO4	SI03	NO2	NO3	DT	Z	T	S	OZ	SIGT	DT	DO								
1	15.30	33.449	6.15					322.2	0	15.30	33.449	6.15	24.732	322.2	0								
10	15.30	33.452	6.04					322.0	10	15.30	33.452	6.04	24.734	322.0	.032								
34	14.35	33.428	6.30					304.3	20	15.18	33.450	6.06	24.759	319.6	.064								
43	13.50	33.427	6.41					287.6	30	14.73	33.433	6.17	24.843	311.6	.096								
56	12.84	33.497	5.55					269.9	50	13.11	33.461	6.00	25.201	277.6	.155								
70	12.06	33.556	5.07					251.3	75	11.67	33.584	4.80	25.572	242.3	.220								
94	10.50	33.710	3.92					213.0	100	10.40	33.750	3.81	25.929	208.4	.277								
113	9.96	33.85 A	3.46					193.8	125	9.67	33.895	3.24	26.164	186.0	.327								
132	9.54	33.912	3.13					182.6	150	9.22	33.985	2.80	26.309	172.3	.373								
160	9.07	34.022	2.64					167.2	200	8.59	34.100	2.23	26.499	154.2	.456								
188	8.74	34.083	2.35					157.7	250	8.12	34.165	1.72	26.620	142.7	.532								
224	8.32	34.129	1.99					148.1	300	7.66	34.192	1.33	26.710	134.1	.604								
252	8.11	34.167	1.70					142.3	400	6.95	34.280	.95	26.880	118.0	.735								
300	7.66	34.192	1.33					134.1	500	6.38	34.331	.62	26.997	107.0	.854								
360	7.20	34.243	1.05					124.1	600	5.90	34.351	.31	27.074	99.7	.965								
454	6.64	34.32 A	.82					111.1															
542	6.16	34.336	.458					103.9															
616	5.84	34.356	.288					98.6															

A) POSSIBLE EVAPORATION. THE VALUE WAS ACCEPTED FOR INTERPOLATION AT STANDARD LEVELS OF DEPTH.
 B) OXYGEN SAMPLES AT 542 AND 616 METERS APPEAR TO HAVE BEEN REVERSED. THEY ARE ASSUMED TO BE IN THE CORRECT ORDER.

RV ALEXANDER AGASSIZ

EXPEDITION X

(91.42) 14

LATITUDE 32 47.8N				LONGITUDE 118 34.4W				MO/DAY/YR 04/21/65				MESSENGER TIME 1146				BOTTOM 667M	WIND 320	SPEED 14KT	WEATHER 1	DOMINANT WAVES 320 06 10			
Z	T	S	OZ	P04	S103	N02	N03	DT	Z	T	S	OZ	SIGT	DT	DD								
0	14.90	33.485	6.07					311.3	0	14.90	33.485	6.07	24.847	311.3	0								
9	14.88	33.470	6.13					311.9	10	14.87	33.471	6.13	24.842	311.7	.031								
27	14.70	33.471	6.18					308.2	20	14.77	33.471	6.17	24.864	309.6	.062								
36	14.28	33.452	6.30					301.1	30	14.60	33.465	6.19	24.896	306.6	.093								
49	13.76	33.436	6.10					292.0	50	13.74	33.437	6.08	25.054	291.5	.153								
62	13.43	33.455	5.84					284.2	75	12.78	33.490	5.55	25.288	269.3	.224								
84	12.02	33.525	5.19					252.8	100	10.78	33.606	4.36	25.749	225.4	.286								
101	10.72	33.612	4.31					223.9	125	10.00	33.788	3.84	26.026	199.1	.340								
118	10.25	33.77 A	4.12					203.6	150	9.70	33.909	3.16	26.171	185.3	.388								
134	9.80	33.805	3.46					194.6	200	8.67	34.118	2.03	26.501	154.0	.475								
160	9.25	33.979	2.79					173.1	250	8.14	34.176	1.57	26.627	142.1	.551								
189	8.83	34.090	2.19					158.5	300	7.45	34.210	1.19	26.754	130.0	.621								
216	8.45	34.148	1.85					148.6	400	6.86	34.284	.65	26.895	116.6	.750								
259	8.06	34.179	1.51					140.7	500	6.18	34.313	.49	27.008	105.9	.868								
308	7.34	34.216	1.13					128.0															
383	7.00	34.279	.70					118.8															
462	6.37	34.298	.54					109.3															
552	6.05	34.331	.46					102.9															

RV ALEXANDER AGASSIZ

EXPEDITION X

(91.39) 20

LATITUDE 32 53.9N				LONGITUDE 118 22.2W				MO/DAY/YR 04/21/65				MESSENGER TIME 2139				BOTTOM 916M	WIND 320	SPEED 08KT	WEATHER 1	DOMINANT WAVES 320 03 04			
Z	T	S	OZ	P04	S103	N02	N03	DT	Z	T	S	OZ	SIGT	DT	DD								
0	15.46	33.509	6.21					321.2	0	15.46	33.509	6.21	24.743	321.2	0								
8	15.36	33.512	6.28					318.8	10	15.34	33.513	6.27	24.773	318.3	.032								
26	15.14	33.504	6.16					314.8	20	15.21	33.509	6.22	24.797	316.0	.064								
52	13.50	33.497	5.69					282.5	30	15.09	33.500	6.14	24.817	314.1	.095								
60	12.09	33.540	4.91					253.0	50	13.63	33.500	5.77	25.125	284.8	.155								
73	11.78	33.56	4.77					246.0	75	11.75	33.566	4.72	25.543	245.0	.222								
87	10.93	33.611	4.35					227.5	100	10.36	33.672	4.06	25.875	213.5	.280								
100	10.36	33.672	4.06					213.5	125	9.79	33.784	3.65	26.058	196.1	.332								
122	9.86	33.765	3.73					198.5	150	9.41	33.922	3.09	26.229	179.8	.379								
139	9.53	33.870	3.29					185.5	200	8.81	34.086	2.49	26.453	158.6	.466								
165	9.24	33.981	2.87					172.8	250	8.18	34.130	1.85	26.584	146.1	.544								
191	8.96	34.08 A	2.58					161.2	300	7.78	34.196	1.27	26.696	135.5	.616								
217	8.53	34.086	2.32					154.4	400	6.92	34.251	.75	26.862	119.8	.750								
261	8.09	34.147	1.69					143.5	500	6.27	34.300	.48	26.987	107.9	.870								
310	7.70	34.206	1.18					133.7															
386	7.02	34.244	.80					121.7															
465	6.48	34.283	.56					111.8															
549	5.99	34.324	.41					102.7															

RV ALEXANDER AGASSIZ

EXPEDITION X

(91.34) 22

LATITUDE 33 03.7N				LONGITUDE 118 00.8W				MO/DAY/YR 04/22/65				MESSENGER TIME 0449				BOTTOM 981M	WIND 290	SPEED 08KT	WEATHER 4	DOMINANT WAVES 300 04 08			
Z	T	S	OZ	P04	S103	N02	N03	DT	Z	T	S	OZ	SIGT	DT	DD								
0	16.05	33.471	5.95					336.5	0	16.05	33.471	5.95	24.582	336.5	0								
10	16.00	33.478	6.02					334.9	10	16.00	33.478	6.02	24.598	334.9	.034								
34	14.44	33.473	6.29					302.8	20	15.95	33.480	6.05	24.611	333.7	.067								
43	13.52	33.486	5.96					283.6	30	15.60	33.480	6.15	24.689	326.2	.100								
58	11.68	33.528	4.73					246.5	50	13.20	33.490	5.78	25.204	277.2	.161								
73	10.74	33.629	4.08					222.9	75	10.68	33.640	4.03	25.794	221.2	.223								
97	10.26	33.734	3.69					207.2	100	10.16	33.744	3.66	25.965	204.9	.277								
116	9.67	33.796	3.52					193.2	125	9.57	33.828	3.48	26.130	189.2	.327								
136	9.50	33.870	3.41					185.1	150	9.37	33.938	3.15	26.248	178.0	.373								
165	9.24	34.008	2.83					170.8	200	8.90	34.110	2.12	26.458	158.1	.459								
194	9.10	34.099	2.37					161.9	250	8.79	34.263	1.40	26.595	145.1	.537								
233	8.92	34.246	1.51					148.3	300	8.11	34.230	1.30	26.674	137.6	.610								
262	8.66	34.261	1.37					143.3	400	7.46	34.291	.76	26.817	124.0	.747								
310	7.97	34.222	1.28					136.2	500	6.61	34.311	.55	26.950	111.4	.872								
373	7.64	34.283	.85					127.1	600	5.86	34.353	.39	27.081	99.0	.985								
470	6.91	34.299	.62					116.1															
558	6.09	34.337	.44					103.0															
633	5.76	34.364	.36					97.0															

A) POSSIBLE EVAPORATION. THE VALUE WAS ACCEPTED FOR INTERPOLATION AT STANDARD LEVELS OF DEPTH.

RV ALEXANDER AGASSIZ				EXPEDITION X										(91.29) 24			
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES				
33 14.4N		117 41.5W		04/22/65		0952		GMT	787M	070	02KT	4					
Z	T	S	O2	PO4	SI03	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD		
0	16.00	33.492	5.99					333.9	0	16.00	33.492	5.99	24.609	333.9	0		
10	15.44	33.478	6.14					323.0	10	15.44	33.478	6.14	24.723	323.0	.033		
30	13.20	33.499	5.81					276.6	20	14.48	33.480	6.07	24.933	303.1	.064		
40	12.16	33.523	5.28					255.5	30	13.20	33.499	5.81	25.211	276.6	.093		
50	11.83	33.532	5.02					248.9	50	11.83	33.532	5.02	25.502	248.9	.146		
65	10.68	33.611	4.29					223.3	75	10.38	33.640	4.11	25.846	216.2	.204		
80	10.30	33.654	4.04					213.8	100	9.96	33.797	3.37	26.040	197.7	.257		
100	9.96	33.797	3.37					197.7	125	9.30	33.907	3.18	26.235	179.2	.304		
125	9.30	33.907	3.18					179.2	150	9.07	33.982	2.86	26.331	170.2	.349		
144	9.08	33.975	2.90					170.8	200	8.79	34.163	2.33	26.517	152.5	.431		
174	8.76	34.019	2.72					162.8	250	8.42	34.180	1.60	26.587	145.8	.508		
205	8.80	34.188	2.24					150.8	300	8.11	34.216	1.30	26.663	138.6	.581		
235	8.50	34.165	1.78					148.1	400	7.51	34.246	.88	26.775	128.0	.720		
275	8.30	34.211	1.38					141.8	500	6.75	34.278	.61	26.905	115.7	.849		
334	7.84	34.215	1.25					134.9									
409	7.46	34.251	.83					127.0									
483	6.88	34.272	.66					117.7									
562	6.32	34.300	.43					108.6									

RV ALEXANDER AGASSIZ				EXPEDITION X										(90.30) 29			
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES				
33 24.5N		117 54.6W		04/22/65		2025		GMT	611M	180	02KT	4	290 02 10				
Z	T	S	O2	PO4	SI03	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD		
0	15.68	33.472	6.11					328.5	0	15.68	33.472	6.11	24.665	328.5	0		
10	15.26	33.476	6.18					319.4	10	15.26	33.476	6.18	24.761	319.4	.032		
29	13.68	33.473	5.95					287.7	20	15.00	33.480	6.15	24.821	313.7	.064		
39	12.56	33.502	5.33					264.3	30	13.55	33.475	5.90	25.121	285.1	.094		
49	11.81	33.559	4.62					246.6	50	11.74	33.564	4.57	25.543	245.0	.147		
64	11.00	33.628	4.13					227.4	75	10.67	33.675	3.99	25.822	218.5	.206		
78	10.60	33.690	3.95					216.1	100	9.86	33.895	2.95	26.134	188.8	.257		
98	9.90	33.883	3.00					190.4	125	9.50	33.994	2.68	26.271	175.9	.303		
123	9.52	33.988	2.69					176.6	150	9.34	34.054	2.49	26.344	168.9	.347		
141	9.36	34.034	2.60					170.7	200	9.15	34.164	1.78	26.461	157.8	.430		
172	9.31	34.101	2.15					165.0	250	8.87	34.212	1.42	26.542	150.1	.509		
201	9.14	34.166	1.77					157.6	300	8.49	34.243	1.22	26.626	142.1	.585		
230	9.00	34.189						153.7	400	7.51	34.264	.85	26.788	126.7	.726		
268	8.74	34.230	1.35					146.8	500	6.76	34.301	.58	26.922	114.0	.853		
328	8.24	34.246	1.13					138.3									
401	7.50	34.264	.85					126.6									
475	6.94	34.297	.65					116.7									
554	6.38	34.296	.43					109.6									

RV ALEXANDER AGASSIZ				EXPEDITION X										(90.37) 34			
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES				
33 10.9N		118 22.8W		04/23/65		0800		GMT	1162M	270	05KT	0	280 03 10				
Z	T	S	O2	PO4	SI03	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD		
0	15.26	33.494	6.12					318.1	0	15.26	33.494	6.12	24.775	318.1	0		
10	15.28	33.482	6.17					319.4	10	15.28	33.482	6.17	24.762	319.4	.032		
30	13.58	33.521	5.91					282.2	20	15.00	33.490	6.15	24.829	313.0	.064		
40	13.16	33.529	5.56					273.6	30	13.58	33.521	5.91	25.152	282.2	.093		
55	12.19	33.554	4.96					253.7	50	12.54	33.544	5.16	25.376	260.9	.148		
70	11.20	33.595	4.43					233.3	75	10.60	33.630	4.12	25.801	220.5	.208		
95	10.22	33.739	3.70					206.2	100	10.15	33.764	3.59	25.983	203.2	.262		
116	9.93	33.840	3.28					194.1	125	9.79	33.885	3.15	26.136	188.6	.311		
135	9.64	33.932	3.02					182.7	150	9.41	33.998	2.76	26.287	174.3	.357		
155	9.34	34.015	2.69					171.8	200	8.89	34.087	2.40	26.441	159.7	.443		
185	8.92	34.045	2.63					163.2	250	8.56	34.210	1.66	26.589	145.6	.521		
220	8.87	34.147	2.04					154.9	300	8.12	34.259	1.19	26.695	135.6	.594		
250	8.56	34.210	1.66					145.6	400	7.15	34.273	.73	26.846	121.3	.728		
300	8.12	34.259	1.19					135.6	500	6.39	34.305	.51	26.974	109.1	.850		
354	7.54	34.255	.92					127.8	600	5.80	34.345	.38	27.082	98.9	.961		
439	6.86	34.291	.61					116.1									
524	6.22	34.310	.48					106.6									
610	5.76	34.351	.37					98.0									

RV ALEXANDER AGASSIZ

EXPEDITION X

(90.42) 40

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
33 00.5N		118 42.1W		04/23/65		1829		GMT	944M	330	05KT	0	290 07 06		
Z	T	S	OZ	PO4	SIO3	NO2	NO3	DT	Z	T	S	OZ	SIGT	DT	DD
0	15.59	33.479	5.98					326.1	0	15.59	33.479	5.98	24.691	326.1	0
10	15.33	33.477	6.02					320.8	10	15.33	33.477	6.02	24.747	320.8	.032
29	14.38	33.458	6.25					302.7	20	15.20	33.470	6.06	24.770	318.6	.064
39	13.28	33.471	5.90					280.1	30	14.27	33.459	6.23	24.961	300.4	.095
53	12.20	33.503	5.19					257.7	50	12.38	33.496	5.34	25.368	261.6	.152
68	11.70	33.553	4.76					245.1	75	11.53	33.580	4.67	25.595	240.1	.215
92	10.86	33.615	4.41					226.0	100	10.49	33.670	4.09	25.851	215.7	.272
113	9.94	33.779	3.53					198.8	125	9.66	33.877	3.21	26.152	187.1	.323
132	9.54	33.924	3.08					181.7	150	9.16	33.966	2.86	26.304	172.7	.369
151	9.14	33.967	2.85					172.3	200	8.49	34.076	2.40	26.495	154.6	.452
180	8.66	34.037	2.57					159.9	250	8.08	34.139	1.84	26.608	143.9	.529
214	8.40	34.098	2.28					151.6	300	7.67	34.199	1.32	26.715	133.7	.601
243	8.14	34.130	1.93					145.5	400	6.93	34.279	.74	26.882	117.9	.732
292	7.72	34.192	1.38					135.0	500	6.25	34.325	.49	27.009	105.8	.850
346	7.37	34.234	1.05					127.1	600	5.76	34.360	.40	27.099	97.3	.959
427	6.71	34.299	.62					113.5							
511	6.19	34.328	.48					104.9							
596	5.78	34.359	.40					97.6							

RV ALEXANDER AGASSIZ

EXPEDITION X

(89.46) 42

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
33 01.4N		119 03.2W		04/24/65		0025		GMT	1757M	310	08KT	1	290 04 08		
Z	T	S	OZ	PO4	SIO3	NO2	NO3	DT	Z	T	S	OZ	SIGT	DT	DD
0	15.43	33.499	6.10					321.3	0	15.43	33.499	6.10	24.742	321.3	0
9	15.16	33.500	6.21					315.5	10	15.14	33.502	6.21	24.806	315.2	.032
28	14.86	33.524	6.19					307.6	20	15.02	33.514	6.20	24.843	311.6	.063
52	12.20	33.556	5.01					253.8	30	14.15	33.540	5.93	25.049	292.0	.093
81	10.70	33.653	4.68					220.5	50	12.38	33.553	5.09	25.414	257.3	.149
105	9.92	33.789	3.61					197.7	75	10.93	33.629	4.75	25.740	226.2	.209
134	9.32	33.921	3.16					178.5	100	10.08	33.750	3.84	25.984	203.1	.264
159	9.08	34.020	2.71					167.5	125	9.46	33.890	3.22	26.196	183.0	.312
211	8.58	34.098	2.27					154.2	150	9.15	33.988	2.87	26.322	171.0	.357
316	7.55	34.222	1.18					130.4	200	8.69	34.089	2.34	26.475	156.4	.441
419	6.81	34.273	.69					116.8	250	8.18	34.151	1.85	26.601	144.6	.518
522	6.09	34.327	.56					103.7	300	7.70	34.207	1.34	26.716	133.6	.590
625	5.74	34.356	.42					97.4	400	6.94	34.267	.75	26.871	118.9	.722
728	5.23	34.390	.47					89.0	500	6.23	34.316	.57	27.005	106.2	.841
830	4.80	34.424	.48					81.7	600	5.82	34.350	.45	27.084	98.7	.951
933	4.40	34.449	.48					75.6	700	5.37	34.381	.45	27.162	91.3	1.054
1031	4.14	34.477	.60					70.9	800	4.92	34.415	.48	27.242	83.7	1.150
1255	3.84	34.498	.65					66.4	1000	4.21	34.469	.56	27.363	72.2	1.324
1557	3.76	34.504	.70					65.1	1200	3.89	34.496	.64	27.419	66.9	1.484
1667	3.75	34.505	.69					65.0	1500	3.78	34.503	.70	27.436	65.4	1.717

RV ALEXANDER AGASSIZ

EXPEDITION X

(89.39) 44

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
33 15.2N		118 38.3W		04/24/65		0448		GMT	1350M	300	05KT	1	270 03 10		
Z	T	S	OZ	PO4	SIO3	NO2	NO3	DT	Z	T	S	OZ	SIGT	DT	DD
0	15.62	33.485	6.09					326.3	0	15.62	33.485	6.09	24.689	326.3	0
10	15.51	33.488	6.17					323.8	10	15.51	33.488	6.17	24.716	323.8	.033
29	14.31	33.466	6.29					300.7	20	15.15	33.480	6.24	24.789	316.8	.065
39	13.92	33.484	6.29					291.6	30	14.26	33.468	6.29	24.968	299.7	.095
53	12.54	33.528	5.20					262.6	50	13.15	33.500	5.75	25.222	275.5	.153
68	11.78	33.571	4.69					245.1	75	11.41	33.599	4.43	25.632	236.6	.218
93	10.65	33.678	3.95					217.8	100	10.50	33.710	3.89	25.880	213.0	.274
112	9.98	33.774	3.74					199.8	125	9.56	33.830	3.52	26.133	188.9	.325
132	9.38	33.860	3.39					183.9	150	9.05	33.967	3.07	26.321	171.1	.371
151	9.04	33.972	3.05					170.4	200	8.86	34.122	2.23	26.474	156.6	.454
182	8.90	34.060	2.66					161.8	250	8.27	34.156	1.84	26.591	145.4	.532
216	8.77	34.162	1.90					152.3	300	8.08	34.236	1.27	26.683	136.7	.605
245	8.30	34.149	1.89					146.4	400	7.16	34.279	.78	26.850	120.9	.739
294	8.12	34.230	1.31					137.8	500	6.40	34.312	.50	26.979	108.7	.861
348	7.66	34.264	1.02					128.8	600	5.90	34.360	.38	27.081	99.0	.972
431	6.88	34.286	.67					116.7							
514	6.32	34.318	.48					107.2							
599	5.91	34.359	.38					99.2							

a) ALTERNATE VALUE, 15.58 DEGREES.

b) POSSIBLE EVAPORATION. THE VALUE WAS ACCEPTED FOR INTERPOLATION AT STANDARD LEVELS OF DEPTH.

RV ALEXANDER AGASSIZ

EXPEDITION X

(88.40) 52

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
33 26.1N		118 48.6W		04/24/65		1948		GMT	1313M	310	05KT	0	270 03 10		
Z	T	S	OZ	PO4	SIO3	NO2	NO3	DT	Z	T	S	OZ	SIGT	DT	DD
0	16.23	33.499	6.13					338.4	0	16.23	33.499	6.13	24.562	338.4	0
10	15.18	33.499	6.21					316.0	10	15.18	33.499	6.21	24.797	316.0	.033
30	14.50	33.493	6.22					302.5	20	14.94	33.500	6.21	24.850	311.0	.066
39	13.06	33.499	5.68					273.9	30	14.50	33.493	6.22	24.939	302.5	.095
54	12.24	33.525	5.04					256.8	50	12.49	33.518	5.24	25.366	261.9	.152
68	11.14	33.591	4.42					232.5	75	10.77	33.634	4.17	25.773	223.2	.213
94	10.10	33.764	3.66					203.9	100	9.94	33.771	3.56	26.023	199.4	.266
114	9.61	33.825	3.40					190.1	125	9.32	33.869	3.35	26.202	182.4	.314
134	9.12	33.903	3.30					176.8	150	8.92	33.957	2.99	26.334	169.8	.359
153	8.90	33.966	2.92					168.8	200	8.60	34.109	2.17	26.503	153.8	.441
183	8.76	34.070	2.40					159.0	250	8.16	34.177	1.57	26.624	142.4	.517
217	8.43	34.137	1.96					149.1	300	7.88	34.224	1.24	26.703	134.9	.589
247	8.18	34.173	1.60					142.9	400	7.05	34.252	.77	26.844	121.4	.723
296	7.92	34.222	1.26					135.5	500	6.44	34.285	.49	26.953	111.2	.846
350	7.40	34.236	.98					127.3	600	5.90	34.330	.39	27.057	101.3	.960
433	6.85	34.263	.66					118.0							
517	6.34	34.291	.46					109.5							
601	5.90	34.330	.39					101.2							

RV ALEXANDER AGASSIZ

EXPEDITION X

(88.36) 54

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
33 34.4N		118 32.5W		04/24/65		2355		GMT	888M	240	08KT	1	230 03 10		
Z	T	S	OZ	PO4	SIO3	NO2	NO3	DT	Z	T	S	OZ	SIGT	DT	DD
0	17.18		6.03					363.0	0	17.18	33.450	6.03	24.304	363.0	0
9	16.04	33.450	6.30					337.8	10	16.00	33.453	6.30	24.579	336.8	.035
28	13.96	33.458	6.25					294.3	20	14.20	33.450	6.27	24.969	299.6	.067
37	13.54	33.479	6.03					284.6	30	13.89	33.463	6.23	25.044	292.5	.097
50	12.46	33.504	5.07					262.4	50	12.46	33.504	5.07	25.361	262.4	.152
64	11.36	33.554	4.45					239.0	75	10.94	33.610	4.17	25.725	227.7	.214
88	10.50	33.682	3.78					215.0	100	10.15	33.756	3.47	25.976	203.8	.268
106	10.00	33.792	3.35					198.8	125	9.68	33.888	3.12	26.159	186.5	.318
124	9.70	33.884	3.13					187.2	150	9.20	33.979	2.69	26.307	172.4	.363
142	9.31	33.949	2.84					176.3	200	8.91	34.135	1.99	26.476	156.4	.447
168	9.05	34.043	2.37					165.3	250	8.35	34.191	1.65	26.606	144.0	.524
199	8.93	34.135	1.99					156.7	300	8.03	34.244	1.12	26.697	135.4	.596
225	8.32	34.122	2.05					148.7	400	7.18	34.257	.71	26.830	122.8	.731
270	8.38	34.235	1.27					141.1	500	6.46	34.299	.51	26.960	110.5	.855
318	7.77	34.239	1.09					132.2							
397	7.20	34.256	.72					123.1							
476	6.62	34.289	.56					113.1							
559	6.12	34.321	.36					104.5							

RV ALEXANDER AGASSIZ

EXPEDITION X

(88.33) 56

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
33 40.5N		118 20.0W		04/25/65		0720		GMT	464M	270	08KT	0	310 02 12		
Z	T	S	OZ	PO4	SIO3	NO2	NO3	DT	Z	T	S	OZ	SIGT	DT	DD
0	16.20	33.448	6.61					341.4	0	16.20	33.448	6.61	24.530	341.4	0
10	14.62	33.457	6.65					307.6	10	14.62	33.457	6.65	24.885	307.6	.032
30	12.02	33.525	4.64					252.8	20	13.19	33.484	5.71	25.201	277.6	.062
44	10.96	33.595	4.30					229.2	30	12.02	33.525	4.64	25.461	252.8	.088
54	10.68	33.625	4.11					222.2	50	10.78	33.612	4.20	25.754	224.9	.136
68	9.89	33.746	3.50					200.4	75	9.69	33.793	3.40	26.083	193.7	.189
83	9.56	33.836	3.33					188.5	100	9.47	33.896	3.00	26.199	182.7	.236
98	9.47	33.892	3.02					183.0	125	9.46	33.948	2.86	26.242	178.6	.282
123	9.48	33.942	2.88					179.4	150	9.15	34.026	2.52	26.352	168.2	.326
143	9.21	34.005	2.62					170.6	200	8.83	34.116	2.05	26.473	156.7	.409
173	9.02	34.082	2.23					162.0	250	8.44	34.192	1.44	26.594	145.2	.487
202	8.82	34.118	2.04					156.3	300	8.16	34.210	1.29	26.650	139.9	.560
238	8.52	34.182	1.47					147.1	400	7.65	34.236	.92	26.745	130.8	.702
292	8.20	34.208	1.32					140.5							
347	7.96	34.220	1.13					136.2							
405	7.62	34.237	.90					130.2							

LA PARED EXPEDITION

The objective of LA PARED Expedition, supported by the Office of Naval Research, was to examine in greater detail an abrupt change in characteristics that had been observed at about 18°N on the SHELLBACK Expedition (Scripps Institution of Oceanography, University of California, 1965; Wooster and Cromwell, 1958): surface temperature increased sharply to the south, but subsurface temperature (100-300 m) decreased sharply, and oxygen at 250 m dropped from 3.0 to 0.2 ml/L in less than 60 miles.

In addition to the hydrographic cast data reported herein, the work on LA PARED included 227 STD lowerings, 56 bathythermograph lowerings, some carbon 14, tritium and borate sampling, 86 current measurements with the GEK, 34 drogue deployments, 14 net tows and 6 phytoplankton samplings.

The depth of the 28 Nansen bottle casts varied from 750 to approximately 4000 m; the casts consisted of 20 bottles, with 16 bottles being lowered for the overlapping deep cast on 2 stations.

As noted in the introduction, no data from the 227 STD analog recordings is tabulated in this report. However, features have been incorporated into the curves except in cases of poor agreement where bathythermograph features have been used.

Personnel participating in the collection of data were:

Ship's Captain:

Collinson, Barnes
RV Argo

Scientific personnel:

Wooster, Dr. W. S. (Chief scientist)
Anderson, M. C.
Berger, W. H.
Bradshaw, J. S.
Hester, F.
Houtermans, J. C.
Jerde, C. E.
Mantyla, A. W.
Muus, D. A.
Rosendahl, D. V.
Wirth, D.

Publications utilizing LA PARED data are:

Berger, W. H., 1970. Planktonic Foraminifera: Differential Production and Expatriation off Baja California. *Limnol. Oceanogr.*, 15: 183-204.

Berger, W. H., 1971. Planktonic Foraminifera: Sediment Production in an Oceanic Front. J. Foram. Res., 1: 95-118.

Wooster, W. S., and J. H. Jones, 1966. Frontal Studies with in situ Salinometer. Second International Oceanographic Congress, Moscow, 1966, Abstracts of Papers, 398.

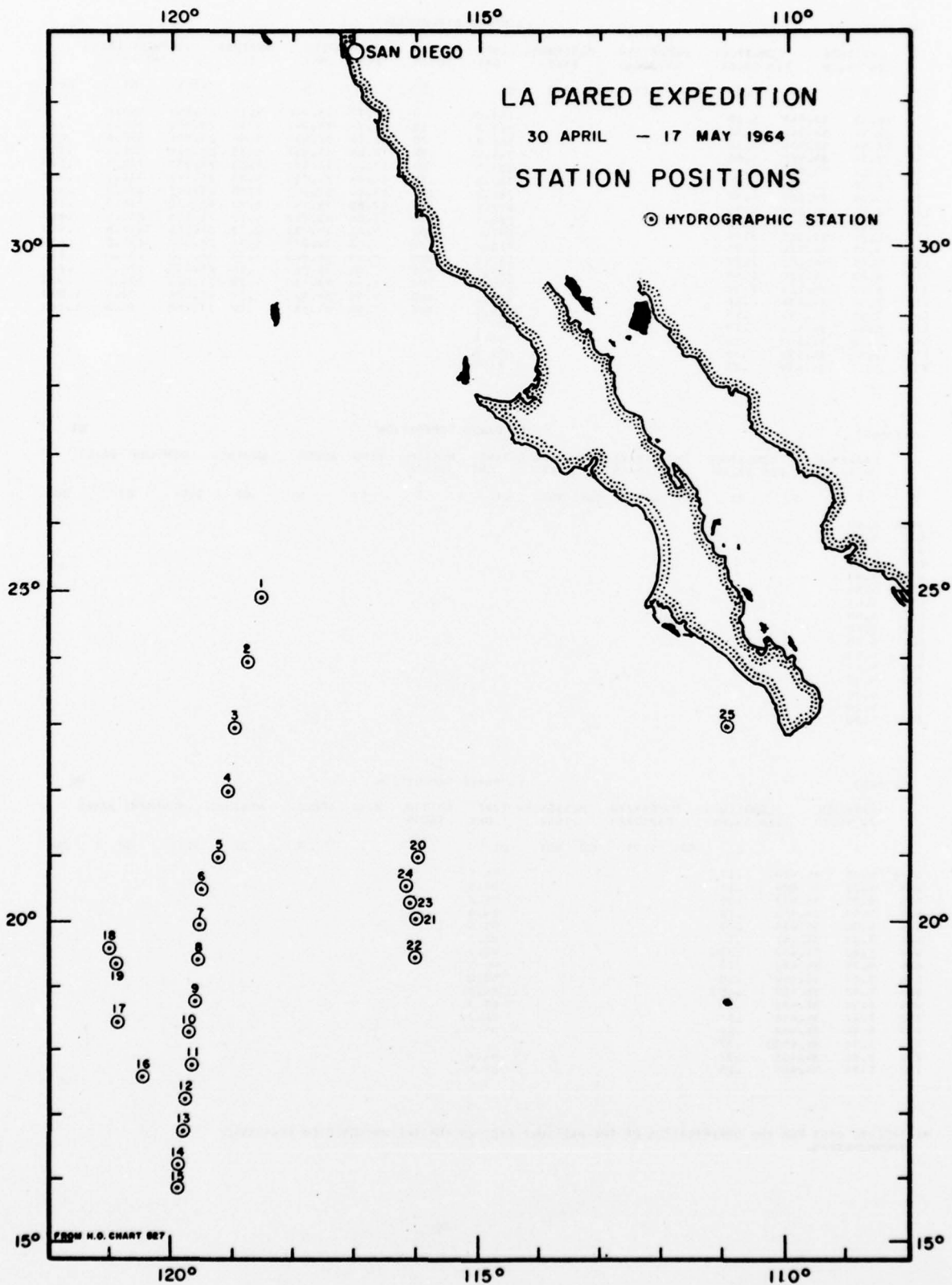


FIGURE 2

RV ARGO

LA PARED EXPEDITION

1

LATITUDE 24 55.0N				LONGITUDE 118 33.0W		MO/DAY/YR 04/30/65		MESSENGER 1315		TIME GMT	BOTTOM 3892M	WIND 350	SPEED 10KT	WEATHER 1	DOMINANT WAVES 340 03 10		
Z	T	S	O2	PD4	S103	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD		
0	18.72	33.942	5.18					363.0	0	18.72	33.942	5.18	24.304	363.0	0		
15	18.74	33.941	5.50					363.5	10	18.73	33.942	5.44	24.300	363.3	.036		
30	18.64	33.934	5.38					361.6	20	18.71	33.939	5.46	24.305	362.9	.073		
45	17.74	33.927	5.66					341.0	30	18.64	33.934	5.38	24.318	361.6	.109		
59	17.47	33.917	5.51					335.5	50	17.62	33.922	5.63	24.559	338.7	.179		
79	16.58	33.900	5.37					316.8	75	16.94	33.950	5.38	24.743	321.1	.262		
99	14.04	33.603	5.52					285.2	100	13.97	33.601	5.50	25.133	284.0	.339		
128	12.58	33.667	4.72					252.6	125	12.68	33.649	4.83	25.430	255.7	.407		
152	11.15	33.756	4.14					220.5	150	11.26	33.748	4.19	25.774	223.1	.467		
177	10.24	33.865	3.45					197.2	200	9.81	34.011	2.78	26.231	179.6	.570		
202	9.79	34.024	2.72					178.2	250	9.06	34.226	1.57	26.522	152.0	.655		
230	9.45	34.196	1.77					160.1	300	8.24	34.229	1.39	26.652	139.6	.731		
259	8.88	34.226	1.54					149.2	400	7.01	34.289	.58	26.878	118.2	.865		
303	8.20	34.228	1.38					139.1	500	6.64	34.414	.18	27.028	104.0	.983		
352	7.30	34.234	.86					126.1	600	5.95	34.422	.17	27.124	94.9	1.090		
401	7.01	34.290	.58					118.1	700	5.56	34.467	.22	27.208	86.9	1.190		
475	6.88	34.414	.19					107.2									
553	6.10	34.400	.16					98.4									
651	5.84	34.451	.19					91.4									
756	5.11	34.479	.28					81.0									

RV ARGO

LA PARED EXPEDITION

Q1

LATITUDE 24 55.0N				LONGITUDE 118 33.0W		MO/DAY/YR 04/30/65		MESSENGER 1517		TIME GMT	BOTTOM 3815M	WIND	SPEED	WEATHER	DOMINANT WAVES		
Z	T	S	O2	PD4	S103	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD		
594A	5.95																
603	5.98																
613	5.93																
622	5.94																
632	5.90																
642	5.86																
652	5.64																
662	5.65																
671	5.60																
681	5.50																
690	5.53																
700	5.43																
709	5.37																
719	5.30																
728	5.24																
738	5.20																

RV ARGO

LA PARED EXPEDITION

Q2

LATITUDE 24 55.0N				LONGITUDE 118 33.0W		MO/DAY/YR 04/30/65		MESSENGER 1638		TIME GMT	BOTTOM 3815M	WIND	SPEED	WEATHER	DOMINANT WAVES		
Z	T	S	O2	PD4	S103	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD		
594A	6.02	34.410	.17					96.7									
604	6.01	34.409	.15					96.6									
614	6.05	34.427	.20					95.8									
624	5.99	34.436	.18					94.4									
634	5.90	34.434	.23					93.4									
644	5.88	34.441	.17					92.7									
654	5.80	34.452	.36U					90.9									
664	5.75	34.452	.17					90.3									
674	5.67	34.444	.20					90.0									
684	5.52	34.438	.36U					88.7									
694	5.52	34.449	.23					87.9									
702	5.42	34.456	.22					86.2									
712	5.40	34.448	.25					86.5									
722	5.34	34.493U	.27														
732	5.26	34.456	.27					84.4									
742	5.24	34.465	.25					83.5									

A) SPECIAL CAST FOR THE VERIFICATION OF THE PRESSURE FACTORS FOR THE UNPROTECTED REVERSING THERMOMETERS.

RV ARGO

LA PARED EXPEDITION

2

LATITUDE 23 57.0N			LONGITUDE 118 45.0W			MO/DAY/YR 04/30/65			MESSENGER TIME 2339			BOTTOM 4218M			WIND 360			SPEED 09KT			WEATHER 1			DOMINANT WAVES 350 03 05		
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD											
0	19.10	34.115	5.15	.31		.01		359.5	0	19.10	34.115	5.15	24.340	359.5	0											
13	19.02	34.105	5.34	.29		.00		358.3	10	19.05	34.110	5.30	24.349	358.7	.036											
26	18.84	34.072	5.45	.39		.00		356.4	20	18.94	34.086	5.41	24.359	357.7	.072											
40	18.52	34.097	5.48	.27		.00		346.9	30	18.76	34.081	5.46	24.400	353.8	.107											
58	17.92	33.981	5.37	.41		.02		341.3	50	18.20	34.039	5.42	24.508	343.5	.177											
79	17.27	33.921	5.52	.32		.00		330.7	75	17.43	33.930	5.49	24.611	333.7	.263											
101	15.56	33.869	5.32	.41		.02		297.0	100	15.65	33.871	5.33	24.978	298.8	.342											
123	13.48	33.832	4.34	.89		.08		257.5	125	13.26	33.822	4.30	25.448	254.1	.412											
146	11.28	33.764	4.00	1.34		.02		222.2	150	11.05	33.780	3.90	25.837	217.1	.472											
168	10.34	33.878	3.44	1.65		.01		197.9	200	9.74	34.011	2.88	26.245	178.4	.573											
194	9.80	33.984	3.01	1.90		.00		181.3	250	9.19	34.226	1.60	26.502	153.9	.658											
220	9.57	34.101	2.40	2.18		.00		169.1	300	8.41	34.292	1.04	26.676	137.4	.733											
250	9.19	34.226	1.60	2.53		.00		153.9	400	7.17	34.339	.43	26.896	116.6	.866											
289	8.56	34.280	1.14	2.75		.00		140.4	500	6.57	34.403	.23	27.028	104.0	.983											
337	7.93	34.318	.78	3.02		.00		128.5	600	6.00	34.436	.21	27.129	94.5	1.090											
385	7.28	34.328	.50	3.24		.00		118.8	700	5.49	34.462	.26	27.212	86.6	1.189											
459	6.85	34.384	.25	3.31		.00		109.0																		
535	6.34	34.416	.21	3.35		.00		100.1																		
637	5.82	34.445	.21	3.43		.00		91.7																		
745	5.26	34.474	.31	3.52		.00		83.0																		

RV ARGO

LA PARED EXPEDITION

3

LATITUDE 22 58.0N			LONGITUDE 118 57.0W			MO/DAY/YR 05/01/65			MESSENGER TIME 1046			BOTTOM 4036M			WIND 360			SPEED 10KT			WEATHER 1			DOMINANT WAVES		
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD											
0	19.68	34.334	4.81			.00		357.8	0	19.68	34.334	4.81	24.358	357.8	0											
14	19.70	34.333	4.83			.00		358.4	10	19.69	34.333	4.82	24.353	358.3	.036											
28	19.66	34.333	4.92			.01		357.4	20	19.68	34.333	4.87	24.356	358.0	.072											
42	19.44	34.373	4.99			.00		349.1	30	19.65	34.342	4.93	24.372	356.4	.108											
60	18.54	34.203	4.95			.00		339.7	50	19.04	34.299	4.98	24.496	344.7	.178											
83	17.90	34.163	4.99			.01		327.6	75	18.35	34.220	4.98	24.608	334.0	.263											
105	15.55	34.003	4.79			.09		287.0	100	16.26	34.050	4.86	24.978	298.8	.343											
127	13.41	33.88 A	4.27			.05		252.6	125	13.56	33.888	4.32	25.439	254.9	.413											
149	11.91	33.823	4.13			.01		228.9	150	11.85	33.824	4.10	25.724	227.8	.474											
171	10.78	33.884	3.39			.00		204.8	200	9.83	34.025	2.76	26.239	178.8	.578											
197	9.88	34.007	2.84			.00		180.9	250	9.17	34.252	1.43	26.527	151.6	.663											
223	9.58	34.154	2.10			.00		165.3	300	8.68	34.346	.81	26.676	137.4	.737											
253	9.12	34.261	1.36			.00		150.2	400	7.74	34.430	.30	26.885	117.6	.871											
292	8.76								500	6.95	34.453	.16	27.016	105.1	.990											
341	8.28	34.361	.62			.00		130.3	600	6.18	34.467	.17	27.130	94.4	1.098											
390	7.82	34.424	.34			.01		119.1	700	5.57	34.477	.20	27.215	86.3	1.197											
466	7.24	34.445	.16			.00		109.6																		
543	6.58	34.461	.16			.00		99.8																		
646	5.89	34.47 A	.18			.00		90.6																		
754	5.28	34.486	.22			.00		82.3																		

RV ARGO

LA PARED EXPEDITION

4

LATITUDE 22 00.0N			LONGITUDE 119 05.0W			MO/DAY/YR 05/01/65			MESSENGER TIME 1906			BOTTOM 4189M			WIND 020			SPEED 10KT			WEATHER 2			DOMINANT WAVES 360 04 04		
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD											
0	19.58	34.152	5.38					368.6	0	19.58	34.152	5.38	24.245	368.6	0											
14	19.56	34.150	5.37			.00		368.2	10	19.57	34.152	5.37	24.248	368.3	.037											
28	19.51	34.179	5.44			.01		364.9	20	19.55	34.156	5.40	24.256	367.5	.074											
42	19.32	34.284	5.36			.01		352.6	30	19.50	34.201	5.43	24.302	363.2	.110											
61	18.74	34.260	5.50			.01		340.3	50	18.95	34.210	5.38	24.450	349.0	.182											
84	18.30	34.205	5.38			.00		333.9	75	18.68	34.280	5.44	24.572	337.4	.268											
107	16.42	33.943	5.30					310.1	100	17.01	34.000	5.32	24.765	319.1	.351											
130	13.80	33.830	4.69			.09		263.9	125	14.36	33.844	4.85	25.237	274.1	.426											
153	12.38	33.796	4.21			.02		239.4	150	12.54	33.796	4.28	25.571	242.3	.491											
177	10.72	33.927	3.37			.01		200.6	200	10.13	34.038	2.81	26.200	182.6	.599											
205	10.07	34.059	2.71			.00		180.1	250	9.51	34.232	1.84	26.455	158.4	.687											
233	9.66	34.166	2.18			.00		165.7	300	9.07	34.356	1.02	26.623	142.5	.765											
265	9.40	34.284	1.56			.00		152.8	400	7.87	34.400	.52	26.842	121.6	.903											
307	9.00	34.364	.94			.01		140.8	500	7.04	34.440	.23	26.994	107.3	1.025											
357	8.44	34.383	.65			.02		131.0	600	6.36	34.462	.22	27.102	97.0	1.136											
408	7.77	34.403	.50			.01		120.0	700	5.59	34.469	.24	27.206	87.1	1.236											
487	7.12	34.435	.23			.01		108.7	800	5.03	34.483		27.284	79.8	1.329											
568	6.62	34.460	.22			.02		100.4																		
674	5.77	34.464	.23			.00		89.6																		
784	5.10	34.483	.30			.00		80.6																		

5

	LATITUDE 21 00.0N	LONGITUDE 119 14.0W	MO/DAY/YR 05/02/65	MESSENGER 1316	TIME GMT	BOTTOM 3892M	WIND 010	SPEED 10KT	WEATHER 1	DOMINANT WAVES 350 04 06					
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	S1GT	DT	DD
0	21.90	34.025	5.03			.00		437.1	0	21.90	34.025	5.03	23.527	437.1	0
16	21.93	34.030	5.04			.00		437.5	10	21.92	34.030	5.04	23.523	437.4	.044
30	21.92	34.025	5.08			.00		437.6	20	21.93	34.029	5.05	23.522	437.6	.088
43	20.96	34.211	5.06			.00		399.1	30	21.92	34.025	5.08	23.521	437.6	.131
61	20.02	34.270	5.30			.00		370.9	50	20.45	34.290	5.22	24.122	380.3	.213
84	18.44	34.140	5.15			.00		341.9	75	19.11	34.194	5.24	24.398	354.0	.306
109	16.46	34.001	4.81			.10		306.8	100	17.40	34.080	4.99	24.733	322.1	.391
131	14.84	33.983	3.87			.09		273.6	125	15.24	33.972	4.17	25.146	282.8	.467
154	12.97	34.083	2.80			.01		229.3	150	13.26	34.058	2.99	25.631	236.7	.533
177	12.25	34.255	1.75			.00		203.3	200	10.72	34.220	1.81	26.238	179.0	.639
204	10.58	34.217	1.82			.00		176.8	250	9.72	34.343	1.12	26.505	153.6	.725
232	10.01	34.299	1.37			.00		161.4	300	9.33	34.463	.45	26.664	138.5	.801
264	9.55	34.374	.93			.00		148.5	400	8.13	34.479	.20	26.865	119.4	.936
305	9.30	34.472	.40			.00		137.4	500	7.08	34.461	.19	27.005	106.2	1.057
356	8.34	34.447	.33			.00		124.8	600	6.20	34.460	.18	27.121	95.2	1.166
406	8.12	34.484	.18			.00		118.9	700	5.64	34.469	.23	27.200	87.8	1.266
484	7.25	34.463	.19			.00		108.4							
564	6.45	34.458	.17			.00		98.4							
669	5.81	34.465	.22			.00		90.0							
778	5.24	34.480	.25			.01		82.3							

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Z	LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		DD
	20	31.0N	119	30.0W	05/02/65	1810	20ZRGMT	4199M	020				10KT	1	
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD
0	20.84	34.382	5.12			.00		383.6	0	20.84	34.382	5.12	24.087	383.6	0
15	20.82	34.382	5.13			.00		383.1	10	20.83	34.383	5.13	24.092	383.2	.038
30	20.81	34.378	5.08			.01		383.1	20	20.82	34.381	5.11	24.093	383.1	.077
45	20.10	34.395	5.23			.00		363.9	30	20.81	34.378	5.08	24.092	383.1	.115
64	18.83	34.261	5.38			.00		342.4	50	19.74	34.360	5.28	24.361	357.5	.189
88	18.53	34.314	5.39			.00		331.4	75	18.73	34.292	5.38	24.569	337.7	.277
113	16.07	34.048	5.17			.04		294.8	100	17.50	34.191	5.28	24.794	316.3	.359
137	13.50	33.987	3.67			.03		246.5	125	14.73	33.988	4.49	25.269	271.0	.434
161	11.94	34.156	2.30			.00		204.9	150	12.58	34.079	2.84	25.783	222.2	.496
186	10.61	34.122	2.29			.00		184.3	200	10.55	34.228	1.89	26.275	175.5	.598
215	10.48	34.322	1.37			.00		167.4	250	10.48	34.527	.57	26.519	152.3	.682
245	10.52	34.511	.65			.00		154.1	300	9.76	34.578	.24	26.682	136.8	.757
279	10.13	34.574	.28			.00		143.0	400	8.14	34.513	.16	26.891	117.0	.891
323	9.32	34.565	.19			.00		130.8	500	6.92	34.477	.20	27.039	103.0	1.008
377	8.49	34.531	.18			.01		112.8	600	6.14	34.464	.19	27.133	94.1	1.115
430	7.71	34.493	.13			.01		120.4	700	5.53	34.479	.25	27.222	85.7	1.213
513	6.80	34.476	.22			.01		101.5	800	4.95	34.499	.27	27.305	77.8	1.304
596	6.17	34.464	.19			.01		94.5	1000	4.19	34.524	.44	27.410	67.8	1.468
703	5.51	34.480	.25			.00		85.4	1200	3.63	34.552	.63	27.490	60.2	1.616
783A	5.05	34.496	.25					79.0	1500	2.87	34.596	1.19	27.596	50.2	1.811
812	4.89	34.500	.29			.00		77.0	2000	2.13	34.639	2.01	27.694	41.0	2.087
930A	4.41	34.515	.36					70.8	2500	1.81	34.658	2.37	27.734	37.1	2.331
1028A	4.11	34.528	.47					66.8	3000	1.60	34.673	2.82	27.762	34.5	2.560
1126A	3.84	34.541	.52					63.1	3500	1.53	34.679	3.00	27.772	33.6	2.784
1372A	3.16	34.579	.96					54.0	4000	1.58	34.681	3.09	27.770	33.7	3.012
1617A	2.64	34.608	1.40					47.3							
1863A	2.29	34.630	1.81					42.8							
2106A	2.03	34.644	2.14					39.8							
2401A	1.86	34.654	2.30					37.8							
2696A	1.72	34.665	2.53					35.9							
2991A	1.60	34.672	2.81					34.6							
3286A	1.54	34.677	3.00					33.8							
3432A	1.53	34.678	2.98					33.6							
3579A	1.53	34.679	3.038					33.5							
3727A	1.55	34.680	3.06					33.6							
3874A	1.56	34.676	3.09					34.0							
4022A	1.58	34.682	3.09					33.7							
4172A	1.59	34.682	3.12					33.7							

A) CAST II.
B) ALTERNATE OXYGEN VALUE, 2.67.

RV ARGO

LA PARED EXPEDITION

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LATITUDE 19 58.0N		LONGITUDE 119 31.0W		MO/DAY/YR 05/03/65		MESSENGER 0143		TIME GMT	BOTTOM 4045M	WIND 030	SPEED 16KT	WEATHER 1	DOMINANT WAVES 350 04 06		
Z	T	S	Q2	P04	S103	N02	N03	DT	Z	T	S	Q2	S1GT	DT	DD
0	22.45	34.015	4.79			.00		452.5	0	22.45	34.015	4.79	23.365	452.5	0
14	22.47	34.015	4.87			.00		453.1	10	22.46	34.015	4.84	23.361	452.9	.045
28	21.84	34.186	4.98			.01		423.9	20	22.44	34.020	4.92	23.372	451.9	.091
42	20.63	34.283	4.97					385.4	30	21.66	34.208	4.98	23.732	417.5	.134
61	19.88	34.392	5.18			.01		358.6	50	20.23	34.337	5.06	24.217	371.3	.213
84	19.14	34.352	5.14			.00		343.3	75	19.58	34.410	5.16	24.441	349.9	.304
108	18.66	34.289	5.26			.01		336.3	100	18.80	34.307	5.22	24.563	338.3	.391
131	17.64	34.167	5.21			.01		321.2	125	18.00	34.204	5.22	24.683	326.8	.475
154	15.30	34.025	4.18			.08		280.1	150	15.78	34.051	4.37	25.087	288.4	.553
178	12.10	33.848	3.75			.01		230.5	200	10.99	34.016	2.68	26.030	198.7	.677
206	10.88	34.078	2.38			.00		192.1	250	10.10	34.317	1.32	26.422	161.5	.769
234	10.44	34.249	1.73			.00		172.1	300	9.05	34.340	.88	26.614	143.3	.848
266	10.08	34.360	1.15			.00		158.0	400	8.06	34.457	.27	26.859	120.1	.986
308	8.96	34.360	.83			.01		140.5	500	7.13	34.482	.10	27.014	105.3	1.107
360	8.58	34.467	.29			.01		126.8	600	6.20	34.472	.16	27.131	94.3	1.215
411	7.91	34.449	.26			.00		118.5	700	5.45	34.478	.22	27.230	84.9	1.313
492	7.20	34.482	.10			.01		106.3	800	5.08	34.489		27.283	79.9	1.404
573	6.45	34.473	.14			.00		97.3							
679	5.58	34.476	.21			.00		86.5							
789	5.10	34.488	.25			.00		80.2							

RV ARGO

LA PARED EXPEDITION

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LATITUDE 19 26.0N		LONGITUDE 119 34.0W		MO/DAY/YR 05/03/65		MESSENGER 0940		TIME GMT	BOTTOM 4055M	WIND 040	SPEED 12KT	WEATHER	DOMINANT WAVES		
Z	T	S	Q2	P04	S103	N02	N03	DT	Z	T	S	Q2	S1GT	DT	DD
0	22.52	33.988	4.89			.00		456.4	0	22.52	33.988	4.89	23.325	456.4	0
12	22.53	33.989	4.94			.00		456.6	10	22.53	33.990	4.93	23.323	456.5	.046
24	22.52	33.985	4.88			.01		456.6	20	22.52	33.987	4.90	23.323	456.6	.091
37	21.84	34.168	4.99			.00		425.2	30	22.34	34.050	4.92	23.423	447.0	.137
53	20.78	34.260	5.20			.00		390.9	50	21.08	34.260	5.17	23.930	398.6	.222
73	19.48	34.209	5.06			.00		362.0	75	19.42	34.207	5.09	24.329	360.6	.317
93	18.74	34.163	5.28			.00		347.4	100	18.21	34.122	5.22	24.567	337.9	.405
110	17.30	34.066	4.96			.05		320.8	125	15.71	34.049	3.98	25.102	287.0	.484
128	15.38	34.049	3.78			.13		280.0	150	13.21	33.989	3.21	25.589	240.7	.551
147	13.52	33.998	3.25			.02		246.1	200	10.74	34.101	2.32	26.142	188.1	.660
167	11.66	33.962	3.04			.00		214.2	250	10.00	34.370	1.07	26.480	156.0	.749
188	10.81	33.995	2.78			.01		197.1	300	9.35	34.440	.57	26.644	140.4	.826
212	10.67	34.200	1.82			.01		179.6	400	7.82	34.429	.31	26.873	118.7	.962
244	10.20	34.368	1.16			.01		159.4	500	6.95	34.467	.16	27.027	104.1	1.080
283	9.58	34.425	.71			.00		145.2	600	6.10	34.465	.19	27.138	93.6	1.187
321	9.04	34.449	.44			.00		135.1							
380	8.04	34.425	.36			.00		122.1							
442	7.44	34.445	.20			.00		112.3							
528	6.72	34.474	.14			.00		100.6							
626	5.88	34.455	.21			.00		91.6							

RV ARGO

LA PARED EXPEDITION

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LATITUDE 18 48.0N		LONGITUDE 119 38.0W		MO/DAY/YR 05/03/65		MESSENGER 1452		TIME GMT	BOTTOM 4257M	WIND 040	SPEED 09KT	WEATHER 1	DOMINANT WAVES 040 04 06		
Z	T	S	Q2	P04	S103	N02	N03	DT	Z	T	S	Q2	SIGT	DT	DD
0	22.16	34.126	4.93			.00		436.7	0	22.16	34.126	4.93	23.531	436.7	0
14	22.18	34.124	4.94			.00		437.4	10	22.17	34.125	4.94	23.526	437.2	.044
28	21.78	34.165	4.94			.00		423.8	20	22.15	34.132	4.94	23.538	436.0	.087
41	20.40	34.339	5.09			.00		375.5	30	21.57	34.193	4.96	23.744	416.4	.130
59	19.26	34.270	5.17			.00		352.2	50	19.77	34.329	5.14	24.331	360.4	.208
80	18.06	34.160	5.29			.00		331.5	75	18.35	34.188	5.27	24.583	336.3	.296
103	16.42	34.045	5.11			.02		302.7	100	16.67	34.059	5.13	24.888	307.3	.377
124	13.98	33.999	3.60			.02		255.0	125	13.87	34.002	3.56	25.462	252.7	.448
146	12.23	34.078	2.77			.01		215.9	150	12.11	34.090	2.60	25.881	212.8	.507
167	12.18	34.289	1.67			.01		199.5	200	11.37	34.523	.67	26.355	167.8	.604
192	11.50	34.484	.84			.01		172.9	250	10.71	34.607	.29	26.541	150.3	.686
218	11.15	34.579	.41			.01		159.8	300	10.02	34.587	.22	26.645	140.4	.762
248	10.74	34.607	.29			.00		150.7	400	8.54	34.495	.25	26.816	124.2	.901
289	10.14	34.584	.25			.00		142.4	500	7.51	34.519	.10	26.988	107.8	1.025
336	9.60	34.580	.16			.01		134.1	600	6.71	34.517	.09	27.099	97.3	1.136
384	8.75	34.497	.28			.00		127.1	700	5.98	34.508	.14	27.189	88.8	1.238
459	7.90	34.517	.10			.00		113.3							
536	7.20	34.517	.10			.01		103.7							
637	6.44	34.515	.09			.00		94.0							
745	5.65	34.501	.20			.01		85.5							

RV ARGO

LA PARED EXPEDITION

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LATITUDE 18 19.0N				LONGITUDE 119 43.0W				MO/DAY/YR 05/03/65				MESSENGER 1946				TIME GMT	BOTTOM 4187M	WIND 030	SPEED 13KT	WEATHER 1	DOMINANT WAVES 360 06 10			
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD									
1	22.62	34.110	4.41			.00		450.3	0	22.62	34.110	4.41	23.389	450.3	0									
15	22.60	34.108	4.88			.00		449.9	10	22.61	34.109	4.76	23.392	450.0	.045									
29	22.51	34.116	4.93			.00		446.8	20	22.58	34.105	4.90	23.397	449.4	.090									
43	20.42	34.406	5.25			.00		371.2	30	22.50	34.120	4.95	23.430	446.3	.135									
61	19.45	34.364	5.46			.00		350.0	50	19.91	34.343	5.36	24.304	362.9	.216									
85	18.20	34.163	5.38			.00		334.6	75	18.77	34.254	5.41	24.528	341.6	.305									
107	16.25	34.047	4.66			.18		298.8	100	16.92	34.069	4.96	24.838	312.1	.387									
130	14.03	34.129	3.08			.03		246.5	125	14.47	34.095	3.45	25.409	257.8	.459									
153	13.03	34.341	1.62			.01		211.5	150	13.10	34.307	1.80	25.855	215.4	.519									
175	12.82	34.657	.57			.01		184.3	200	12.32	34.720	.38	26.328	170.4	.618									
202	12.28	34.717	.37			.01		169.8	250	11.50	34.720	.25	26.484	155.6	.702									
230	11.85	34.738	.38			.01		160.5	300	10.86	34.690	.21	26.578	146.7	.781									
261	11.32	34.706	.18			.00		153.4	400	9.30	34.604	.25	26.778	127.7	.926									
302	10.84	34.689	.21			.00		146.4	500	7.84	34.540	.21	26.956	110.9	1.053									
352	10.02	34.646	.22			.08		135.9	600	6.97	34.516	.20	27.063	100.7	1.168									
403	9.26	34.600	.25			.01		127.3	700	6.09	34.505	.25	27.171	90.4	1.273									
482	8.03	34.546	.23			.02		113.0																
563	7.30	34.523	.16			.00		104.6																
666	6.38	34.507	.26			.00		93.8																
772	5.50	34.505	.15			.01		83.4																

RV ARGO

LA PARED EXPEDITION

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LATITUDE 17 50.0N				LONGITUDE 119 47.0W				MO/DAY/YR 05/04/65				MESSENGER 0234				TIME GMT	BOTTOM 3873M	WIND 040	SPEED 17KT	WEATHER 1	DOMINANT WAVES 020 06 06			
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD									
1	23.91	33.905	4.79			.00		500.6	0	23.91	33.905	4.79	22.862	500.6	0									
15	23.89	33.897	4.90			.01		500.7	10	23.90	33.900	4.85	22.861	500.6	.050									
29	22.90	33.960	5.00			.01		468.7	20	23.78	33.900	4.97	22.896	497.4	.100									
43	22.04	34.135	5.05			.00		432.9	30	22.83	33.972	5.00	23.225	465.9	.148									
61	20.84	34.296	5.18			.01		389.8	50	21.58	34.213	5.10	23.757	415.1	.237									
84	19.29	34.280	5.18			.01		352.2	75	19.88	34.290	5.18	24.272	366.0	.335									
106	16.70	34.122	4.30			.33		303.3	100	17.46	34.159	4.64	24.779	317.7	.421									
128	14.66	34.215	2.60			.03		252.9	125	14.89	34.189	2.85	25.390	259.5	.494									
150	13.75	34.523	1.26			.02		212.1	150	13.75	34.523	1.26	25.890	212.1	.554									
173	13.31	34.796	.66			.01		183.5	200	12.69	34.807	.31	26.324	170.8	.652									
198	12.72	34.807	.32			.01		171.4	250	12.05	34.784	.19	26.431	160.6	.738									
224	12.36	34.800	.23			.01		165.2	300	11.40	34.747	.12	26.524	151.9	.819									
254	12.00	34.781	.18			.01		160.0	400	9.63	34.617	.09	26.735	131.8	.969									
293	11.48	34.750	.11			.00		153.0	500	8.07	34.525	.11	26.911	115.1	1.101									
340	10.88	34.716	.17			.01		145.1	600	7.03	34.524	.10	27.061	100.9	1.218									
386	9.90	34.640	.09			.01		134.4	700	6.20	34.521	.10	27.171	90.5	1.323									
457	8.65	34.541	.11			.01		122.4																
530	7.73	34.581U	.10			.01																		
624	6.81	34.524	.10			.00		98.0																
728	6.00	34.519	.10			.01		88.3																

RV ARGO

LA PARED EXPEDITION

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LATITUDE 17 17.0N				LONGITUDE 119 50.0W				MO/DAY/YR 05/04/65				MESSENGER 1107				TIME GMT	BOTTOM 3982M	WIND 050	SPEED 12KT	WEATHER	DOMINANT WAVES			
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD									
0	23.49	34.002	4.67			.00		481.9	0	23.49	34.002	4.67	23.058	481.9	0									
15	23.51	34.001	4.89			.00		482.5	10	23.51	34.001	4.83	23.052	482.4	.048									
35	23.51	34.006	5.06			.02		482.2	20	23.51	34.002	4.96	23.051	482.5	.097									
50	23.50	34.003	4.91			.00		482.1	30	23.51	34.004	5.04	23.053	482.3	.145									
70	21.69	34.281	5.20			.01		413.0	50	23.50	34.003	4.91	23.055	482.1	.242									
99	18.08	34.182	5.02			.07		330.4	75	21.05	34.280	5.20	23.953	396.4	.352									
119	15.52	34.216	3.02			.08		270.8	100	17.94	34.182	4.94	24.680	327.2	.443									
148	13.64	34.452	.93			.01		215.1	125	14.93	34.230	2.49	25.413	257.4	.517									
178	12.92	34.667	.22			.01		185.5	150	13.58	34.470	.85	25.885	212.5	.577									
203	12.25	34.723	.13			.00		168.8	200	12.33	34.720	.14	26.328	170.4	.675									
237	11.72	34.736	.06			.00		158.3	250	11.53	34.729	.06	26.486	155.5	.759									
267	11.28	34.714	.07			.01		152.1	300	10.67	34.679	.14	26.604	144.2	.837									
305	10.58	34.674	.15			.65		143.1	400	9.37	34.606	.07	26.770	128.5	.981									
349	10.10	34.649	.08			.97		137.0	500	7.95	34.547	.11	26.947	111.7	1.110									
412	9.18	34.595	.07			.01		126.4	600	6.86	34.518	.12	27.080	99.1	1.224									
475	8.28	34.561	.09			.00		115.5	700	6.05	34.520	.10	27.188	88.8	1.327									
565	7.18	34.521	.15			.00		103.1	800	5.37	34.524	.13	27.276	80.5	1.422									
638	6.55	34.519	.08			.00		95.1																
746	5.71	34.521	.11			.00		84.7																
886	4.92	34.528	.15			.02		75.2																

RV ARGO

LA PARED EXPEDITION

13

LATITUDE 16 47.0N			LONGITUDE 119 52.0W		MO/DAY/YR 05/04/65		MESSENGER 1612		TIME GMT	BOTTOM 4018M	WIND 040	SPEED 14KT	WEATHER 1	DOMINANT WAVES 020 07 10	
Z	T	S	Q2	P04	S103	N02	N03	DT	Z	T	S	Q2	SIGT	DT	DD
0	24.14	33.976	4.34			.00		502.0	0	24.14	33.976	4.34	22.847	502.0	0
14	24.12	33.975	4.73			.00		501.5	10	24.13	33.976	4.66	22.851	501.6	.050
27	22.59	33.941	4.82			.00		461.7	20	24.01	33.970	4.78	22.881	498.8	.100
40	22.42	33.943	4.97			.00		456.9	30	22.55	33.942	4.85	23.281	460.6	.148
58	22.24	34.105	5.10			.00		440.4	50	22.32	33.998	5.06	23.388	450.3	.240
80	20.68	34.383	4.96			.00		379.4	75	21.18	34.345	4.99	23.966	395.2	.346
101	17.37	34.071	4.58			.17		322.1	100	17.54	34.085	4.60	24.704	324.8	.437
122	15.12	34.231	2.17			.04		261.2	125	14.83	34.230	2.06	25.435	255.3	.510
143	12.80	34.270	1.63			.01		212.3	150	12.75	34.391	1.23	25.990	202.6	.568
164	12.66	34.549	.44			.01		189.2	200	11.98	34.682	.13	26.365	166.9	.663
189	12.26	34.675	.18			.01		172.5	250	10.99	34.668	.06	26.538	150.5	.745
214	11.61	34.673	.10			.01		160.9	300	10.30	34.624	.06	26.625	142.2	.821
243	11.09	34.673	.07			.01		151.8	400	9.02	34.556	.11	26.788	126.8	.963
282	10.55	34.634	.05			.01		145.5	500	7.64	34.484	.10	26.942	112.2	1.091
328	9.94	34.609	.07			.31		137.3	600	6.69	34.464	.10	27.060	101.0	1.206
376	9.42	34.582	.08			.01		131.1	700	5.97	34.473	.10	27.161	91.4	1.311
448	8.20	34.508	.15			.00		118.2							
523	7.44	34.477	.08			.01		109.9							
621	6.50	34.463	.11			.00		98.6							
727	5.84	34.479	.10			.01		89.4							

RV ARGO

LA PARED EXPEDITION

14

LATITUDE 16 16.0N			LONGITUDE 119 55.0W		MO/DAY/YR 05/04/65		MESSENGER 2054		TIME GMT	BOTTOM 4015M	WIND 040	SPEED 20KT	WEATHER 1	DOMINANT WAVES 030 08 08		
Z	T	S	Q2	P04	S103	N02	N03	DT	Z	T	S	Q2	SIGT	DT	DD	
1	24.32	34.008	4.78	.17		.00		504.8	0	24.32	34.008	4.78	22.818	504.8	0	
15	24.30	34.010	4.83	.16		.00		504.1	10	24.31	34.007	4.81	22.821	504.5	.050	
29	24.24	34.016	4.88	.17		.01		501.9	20	24.28	34.012	4.85	22.834	503.3	.101	
43	23.88	34.054	4.88	.18		.00		489.0	30	24.21	34.019	4.88	22.857	501.0	.151	
62	23.01	34.066	5.05	.21		.00		464.1	50	23.80	34.060	4.90	23.011	486.4	.250	
85	20.52	34.446	5.20	.22		.00		370.8	75	21.32	34.360	5.18	23.940	397.6	.361	
109	16.40	34.250	2.80	1.38		.21		287.3	100	18.05	34.352	3.83	24.784	317.3	.451	
132	13.90	34.340	1.50	2.11		.02		228.4	125	14.42	34.060	1.85	25.392	259.4	.524	
157	12.86	34.589	.48	2.63		.01		190.0	150	13.06	34.588	.71	26.080	194.0	.582	
180	12.35	34.673	.18	2.72		.01		174.3	200	11.88	34.700	.08	26.398	163.8	.674	
209	11.69	34.704	.06	2.77		.00		160.1	250	11.16	34.703	.04	26.535	150.8	.755	
237	11.37	34.713	.02	2.92		.30		153.8	300	10.46	34.673	.07	26.636	141.2	.831	
269	10.84	34.684	.08	2.86		.03		146.7	400	8.97	34.586	.07	26.818	124.0	.971	
312	10.32	34.668	.06	2.92		1.13		139.2	500	7.70	34.523	.10	26.964	110.1	1.096	
363	9.55	34.623	.06	3.05		.54		130.1	600	6.78	34.511	.09	27.085	98.6	1.209	
414	8.76	34.571	.07	3.09		.01		121.8	700	5.98	34.507	.15	27.187	89.0	1.313	
494	7.76	34.524	.10	3.21		.00		110.8	800	5.40	34.506	.16	27.258	82.2	1.408	
574	7.02	34.513	.08	3.30		.00		101.6								
681	6.10	34.507	.15	3.44		.00		90.4								
792	5.45	34.506	.16	3.38		.06		82.8								

RV ARGO

LA PARED EXPEDITION

15

LATITUDE 15 55.0N			LONGITUDE 119 59.0W		MO/DAY/YR 05/05/65		MESSENGER TIME 0955 1221GMT		BOTTOM 4093M	WIND 050	SPEED 16KT	WEATHER	DOMINANT WAVES 030 08 08		
Z	T	S	O2	PO4	SI03	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	24.49	34.051	4.69			.00		506.5	0	24.49	34.051	4.69	22.800	506.5	0
14	24.53	34.051	4.78			.00		507.7	10	24.52	34.051	4.77	22.791	507.3	.051
27	24.44	34.060	4.75			.00		504.5	20	24.50	34.054	4.77	22.801	506.5	.101
41	24.35	34.080	4.77			.00		500.4	30	24.42	34.065	4.75	22.831	503.6	.152
59	22.71	34.098	5.01			.00		453.6	50	23.67	34.082	4.88	23.067	481.1	.251
81	20.09	34.278	5.12			.01		372.1	75	20.87	34.233	5.09	23.966	395.2	.361
104	16.71	34.206	3.44			.58		297.4	100	17.31	34.222	3.79	24.864	309.6	.450
125	13.99	34.241	2.02			.02		237.5	125	13.99	34.241	2.02	23.622	237.5	.519
147	13.23	34.670	.13			.01		191.2	150	13.11	34.693	.12	26.151	187.2	.573
168	12.44	34.744	.06			.20		170.8	200	11.78	34.749	.09	26.454	158.5	.662
195	11.86	34.747	.09			1.43		160.0	250	11.13	34.734	.06	26.563	148.1	.741
221	11.51	34.751	.06			1.55		153.4	300	10.43	34.680	.11	26.648	140.1	.816
251	11.12	34.733	.06			.67		147.9	400	9.15	34.627	.07	26.821	123.6	.955
289	10.58	34.693	.12			1.37		141.7	500	7.76	34.553	.06	26.979	108.6	1.080
335	9.96	34.647	.06			1.12		134.9	600	6.77	34.536	.08	27.106	96.6	1.191
382	9.41	34.640	.07			.51		126.6	700	6.09	34.534	.11	27.194	86.3	1.293
455	8.34	34.578	.05			.00		115.1	800	5.50	34.534	.16	27.268	81.3	1.388
530	7.41	34.542	.07			.00		104.7	1000	4.47	34.549	.40	27.399	68.9	1.558
631	6.54	34.537	.09			.00		93.6	1200	3.80	34.567	.75	27.483	60.9	1.709
741	5.86	34.532	.12			.01		85.6	1500	3.05	34.598	1.02	27.581	51.6	1.909
988A	4.52	34.548	.38					69.4	2000	2.17	34.637	1.92	27.689	41.4	2.191
1117A	4.06	34.558	.61					64.0	2500	1.81	34.658	2.48	27.733	37.2	2.437
1204A	3.79	34.566	.76					60.8	3000	1.64	34.672	2.80	27.758	34.9	2.668
1288A	3.49	34.585	.84					56.5	3500	1.56	34.673	2.99	27.765	34.2	2.895
1505A	3.04	34.597	1.03					51.6							
1721A	2.61	34.618	1.56					46.3							
1939A	2.24	34.632	1.83					42.3							
2160A	2.02	34.646	2.14					39.6							
2429A	1.85	34.655	2.42					37.6							
2700A	1.73	34.664	2.64					36.1							
2974A	1.65	34.672	2.79					34.9							
3250A	1.59	34.672	2.91					34.5							
3390A	1.57	34.675	2.96					34.1							
3533A	1.56	34.672	3.00					34.3							
3674A	1.57	34.674	3.03					34.2							
3819A	1.58	34.675	3.11					34.2							

RV ARGO

LA PARED EXPEDITION

15

LATITUDE 15 55.0N			LONGITUDE 119 59.0W		MO/DAY/YR 05/05/65		MESSENGER TIME 1543		BOTTOM 3959M	WIND 040	SPEED 14KT	WEATHER 2	DOMINANT WAVES 360 10 06		
Z	T	S	O2	PO4	SI03	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
1438	13.56	34.696				.02		195.7	150	13.28	34.701		26.123	189.9	
157	13.02	34.709				.01		184.3	200	11.80	34.748		26.450	158.8	
172	12.51	34.735				.02		172.8	250	11.10	34.723		26.561	148.3	
186	12.08	34.747				1.16		164.0	300	10.34	34.678		26.662	138.7	
200	11.80	34.748				1.56		158.8	400	8.89	34.589		26.833	122.5	
214	11.69	34.750				1.68		156.7	500	7.58	34.553		27.005	106.2	
228	11.46	34.745				1.39		153.0	600	6.59	34.539		27.133	94.1	
242	11.21	34.731				1.30		149.6	700	5.91	34.532		27.216	86.2	
256	11.02	34.717				1.21		147.4							
270	10.84	34.706				1.35		145.1							
285	10.56	34.689				1.45		141.6							
298	10.37	34.679				1.60		139.2							
313	10.14	34.671				1.28		136.0							
327	10.00	34.659				1.36		134.6							
341	9.78	34.647				1.03		132.0							
355	9.56	34.631				.51		129.6							
369	9.41	34.627				.54		127.6							
384		34.612				.21									
398	8.92	34.589				.00		122.9							
412		34.583				.00									
426	8.52	34.576				.01		117.9							
769	5.62	34.527				.00		83.2							

A) CAST II.

B) SPECIAL CAST TO LOCATE THE NITRITE MAXIMUM.

RV ARGO

LA PARED EXPEDITION

16

LATITUDE 17 39.0N				LONGITUDE 120 32.0W		MO/DAY/YR 05/06/65		MESSENGER 0325		TIME GMT	BOTTOM 4026M	WIND 030	SPEED 16KT	WEATHER 1	DOMINANT WAVES 020 06 07			
Z	T	S	O2	PO4	SI03	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD			
0	23.82	34.137	4.65			.00		481.4	0	23.82	34.137	4.65	23.063	481.4	0			
12	23.83	34.134	4.61			.00		481.9	10	23.83	34.134	4.62	23.058	481.8	.048			
25	23.83	34.138	4.70			.00		481.6	20	23.83	34.137	4.66	23.060	481.7	.096			
37	22.35	34.047	4.96			.00		447.5	30	23.80	34.130	4.70	23.064	481.3	.145			
53	21.07	34.284	5.08			.00		396.6	50	21.19	34.228	5.06	23.874	403.9	.233			
73	19.82	34.285	5.05			.01		364.9	75	19.66	34.272	5.03	24.314	362.0	.330			
93	17.70	34.131	4.88			.08		325.3	100	16.58	34.100	4.48	24.942	302.2	.413			
113	15.22	34.087	3.51			.06		273.9	125	14.37	34.345	2.13	25.622	237.5	.482			
132	14.00	34.504	1.38			.02		218.4	150	13.28	34.523	.66	25.986	202.9	.538			
151	13.25	34.520	.64			.01		202.6	200	12.24	34.717	.11	26.341	169.2	.633			
172	12.64	34.644	.22			.01		181.9	250	11.42	34.718	.06	26.499	154.2	.717			
193	12.34	34.703	.12			.00		172.0	300	10.72	34.689	.06	26.603	144.3	.795			
219	11.97	34.739	.09			.00		162.5	400	9.08	34.592	.10	26.806	125.1	.937			
251	11.40	34.717	.06			.00		154.0	500	7.77	34.538	.07	26.966	109.9	1.062			
290	10.88	34.699	.06			.01		146.3	600	6.72	34.521	.08	27.100	97.2	1.175			
330	10.21	34.655	.07			.21		138.3										
390	9.21	34.598	.11			.01		126.6										
453	8.41	34.561	.06			.00		117.4										
539	7.28	34.526	.07			.00		104.1										
631	6.52	34.523	.09			.02		94.4										

RV ARGO

LA PARED EXPEDITION

17

LATITUDE 18 29.0N				LONGITUDE 120 54.0W		MO/DAY/YR 05/06/65		MESSENGER 1518		TIME GMT	BOTTOM 4450M	WIND 020	SPEED 16KT	WEATHER 1	DOMINANT WAVES 050 08 06			
Z	T	S	O2	PO4	SI03	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD			
1	22.54	34.012	4.94			.00		455.2	0	22.54	34.012	4.94	23.337	455.2	0			
15	22.54	34.004	4.94			.00		455.8	10	22.54	34.006	4.94	23.333	455.6	.046			
29	22.54	34.004	5.01			.00		455.8	20	22.54	34.004	4.97	23.331	455.8	.091			
43	22.51	34.003	5.00			.00		455.0	30	22.54	34.004	5.01	23.332	455.7	.137			
61	22.54	34.006	4.90			.00		455.6	50	22.52	34.004	4.95	23.337	455.2	.228			
85	20.78	34.322	5.09			.00		386.4	75	21.91	34.170	4.98	23.634	426.9	.339			
108	18.60	34.199	5.13			.01		341.4	100	19.42	34.276	5.12	24.381	355.6	.438			
131	15.90	34.191	3.11			.11		280.7	125	15.95	34.190	3.14	25.156	281.9	.518			
154	14.08	34.391	1.57			.02		228.3	150	14.46	34.343	1.90	25.601	239.5	.584			
177	12.98	34.584	.43			.01		192.7	200	12.47	34.696	.15	26.280	174.9	.690			
204	12.42	34.707	.10			.01		173.1	250	11.69	34.730	.05	26.458	158.1	.776			
232	12.01	34.729	.06			.03		164.0	300	10.75	34.681	.05	26.592	145.4	.856			
265	11.40	34.723	.04			.09		153.6	400	9.39	34.603	.08	26.764	129.0	1.000			
306	10.64	34.672	.05			.01		144.2	500	7.98	34.534	.09	26.932	113.1	1.130			
357	9.86	34.619	.07			.01		135.3	600	6.86	34.523	.07	27.083	98.8	1.245			
408	9.30	34.600	.08			.00		127.9	700	6.07	34.513	.09	27.180	89.6	1.348			
488	8.14	34.538	.09			.00		115.2	800	5.41	34.510	.12	27.260	82.0	1.444			
568	7.16	34.526	.07			.01		102.5										
673	6.28	34.516	.08			.00		91.9										
783	5.51	34.509	.12			.01		83.2										

RV ARGO

LA PARED EXPEDITION

18

LATITUDE 19 37.0N				LONGITUDE 121 00.0W		MO/DAY/YR 05/08/65		MESSENGER 1359		TIME GMT	BOTTOM 4218M	WIND 050	SPEED 10KT	WEATHER 1	DOMINANT WAVES 030 06 06			
Z	T	S	O2	PO4	SI03	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD			
0	22.42	34.053	4.46			.00		449.0	0	22.42	34.053	4.46	23.402	449.0	0			
15	22.44	34.051	4.68			.00		449.7	10	22.44	34.052	4.62	23.397	449.5	.045			
30	22.44	34.050	4.78			.00		449.7	20	22.44	34.051	4.72	23.395	449.7	.090			
45	22.42	34.056	4.87			.00		448.8	30	22.44	34.050	4.78	23.394	449.7	.135			
65	20.39	34.473	5.18			.00		365.5	50	21.95	34.171	4.96	23.622	428.0	.223			
90	19.04	34.290	5.17			.00		345.4	75	19.90	34.400	5.18	24.351	358.5	.322			
115	16.86	34.124	4.28			.01		306.7	100	18.34	34.220	4.98	24.611	333.7	.409			
139	14.33	34.088	3.21			.32		255.5	125	15.78	34.093	3.81	25.120	285.2	.487			
164	12.40	34.140	2.41			.02		214.5	150	13.35	34.093	2.86	25.639	235.9	.554			
188	11.83	34.365	1.34			.01		187.6	200	11.54	34.434	1.02	26.255	177.3	.659			
218	11.12	34.498	.73			.00		165.3	250	10.47	34.536	.51	26.528	151.5	.744			
247	10.51	34.533	.52			.00		152.3	300	9.75	34.538	.30	26.653	139.6	.820			
281	10.09	34.547	.38			.00		144.4	400	8.16	34.458	.21	26.845	121.4	.957			
325	9.29	34.520	.22			.01		133.6	500	7.26	34.462	.14	26.979	108.6	1.079			
379	8.48	34.484	.16			.00		124.1	600	6.39	34.480	.11	27.113	96.0	1.190			
433	7.72	34.426	.29			.00		117.6	700	5.70	34.489	.11	27.208	86.9	1.290			
517	7.17	34.476	.09			.00		106.4	800	5.13	34.503	.21	27.287	79.4	1.383			
601	6.38	34.480	.11			.00		95.9										
710	5.64	34.490	.11			.01		86.2										
819	5.04	34.506	.24			.01		78.2										

RV ARGO

LA PARED EXPEDITION

19

LATITUDE 19 22.0N			LONGITUDE 120 54.0W		MO/DAY/YR 05/10/65		MESSENGER 1304		TIME GMT	BOTTOM 4189M	WIND 040	SPEED 07KT	WEATHER	DOMINANT WAVES 040 04 05		
Z	T	S	OZ	P04	S103	N02	N03	DT	Z	T	S	OZ	SIGT	DT	DD	
0	22.52	34.026	4.72			.01		453.6	0	22.52	34.026	4.72	23.354	453.6	0	
15	22.54	34.021	4.85			.01		454.5	10	22.54	34.022	4.81	23.346	454.4	.045	
30	22.54	34.025	4.91			.01		454.2	20	22.54	34.023	4.87	23.345	454.4	.091	
45	22.12	34.157	5.11			.00		433.4	30	22.54	34.025	4.91	23.347	454.2	.136	
65	20.71	34.340	5.14			.00		383.3	50	21.82	34.221	5.12	23.696	420.9	.224	
90	18.46	34.198	4.85			.06		338.2	75	19.92	34.280	5.02	24.254	367.7	.323	
114	16.04	34.170	3.35			.18		285.3	100	17.42	34.167	4.32	24.794	316.3	.410	
138	14.18	34.304	1.79			.02		236.7	125	15.11	34.222	2.59	25.368	261.6	.483	
163	13.06	34.435	.97			.01		205.2	150	13.61	34.382	1.27	25.809	219.7	.544	
187	11.68	34.374	1.29			.01		184.2	200	11.57	34.476	.95	26.282	174.8	.645	
216	11.44	34.573	.44			.01		165.3	250	10.84	34.596	.31	26.508	153.3	.729	
246	10.91	34.595	.32			.01		154.5	300	10.10	34.577	.23	26.624	142.3	.806	
280	10.36	34.585	.27			.01		146.0	400	8.59	34.502	.19	26.813	124.4	.947	
324	9.78	34.561	.19			.00		138.3	500	7.30	34.474	.18	26.983	108.3	1.071	
380	8.83	34.501	.20			.00		128.0	600	6.41	34.456	.17	27.092	98.0	1.182	
434	8.22	34.509	.18			.01		118.5	700	5.75	34.485	.19	27.199	87.8	1.284	
517	7.08	34.464	.18			.01		106.1	800	5.26	34.507	.21	27.276	80.5	1.377	
601	6.40	34.456	.17			.00		97.9								
710	5.69	34.489	.19			.00		86.8								
820	5.18	34.510	.21			.01		79.4								

RV ARGO

LA PARED EXPEDITION

20

LATITUDE 21 00.0N			LONGITUDE 116 00.0W		MO/DAY/YR 05/12/65		MESSENGER 0026		TIME GMT	BOTTOM 3835M	WIND 360	SPEED 10KT	WEATHER 1	DOMINANT WAVES 360 04 07		
Z	T	S	OZ	P04	S103	N02	N03	DT	Z	T	S	OZ	SIGT	DT	DD	
0	22.03	34.211	4.96			.01		427.1	0	22.03	34.211	4.96	23.631	427.1	0	
15	22.02	34.210	4.98			.00		426.9	10	22.02	34.211	4.97	23.633	427.0	.043	
29	22.00	34.203	5.00			.01		426.9	20	22.01	34.208	4.99	23.633	426.9	.085	
43	21.74	34.240	5.11			.01		417.3	30	21.98	34.206	5.00	23.641	426.2	.128	
63	19.80	34.193	5.27			.00		371.0	50	20.97	34.230	5.20	23.937	398.0	.211	
87	17.74	34.099	4.62			.11		328.5	75	18.90	34.152	5.08	24.420	351.9	.305	
111	14.38	34.041	3.30			.07		260.0	100	15.72	34.050	3.81	25.100	287.1	.386	
135	12.62	34.219	1.88			.01		212.7	125	13.15	34.124	2.46	25.703	229.8	.451	
159	11.98	34.390	1.11			.01		188.4	150	12.40	34.380	1.28	26.050	196.8	.505	
183	10.83	34.358	1.25			.00		170.6	200	11.08	34.500	1.05	26.391	164.4	.598	
212	10.66	34.512	.60			.01		156.4	250	10.01	34.485	.54	26.567	147.7	.678	
240	10.20	34.491	.55			.01		150.3	300	9.21	34.460	.45	26.682	136.8	.752	
274	9.58	34.473	.50			.01		141.7	400	8.42	34.543	.09	26.871	118.9	.887	
317	9.02	34.461	.40			.00		133.9	500	7.22	34.487	.14	27.005	106.2	1.007	
369	8.82	34.567	.07			.00		123.0	600	6.39	34.480	.15	27.113	96.0	1.116	
422	8.10	34.513	.10			.00		116.4	700	5.74	34.496	.13	27.208	86.9	1.217	
504	7.18	34.487	.14			.00		105.7	800	5.16	34.499	.21	27.281	80.0	1.310	
588	6.48	34.479	.15			.00		97.2								
695	5.77	34.495	.13			.00		87.3								
804	5.14	34.499	.21			.01		79.8								

RV ARGO

LA PARED EXPEDITION

21

LATITUDE 20 01.0N			LONGITUDE 116 02.0W		MO/DAY/YR 05/12/65		MESSENGER 1342		TIME GMT	BOTTOM 3778M	WIND 330	SPEED 07KT	WEATHER 1	DOMINANT WAVES 340 03 07	
Z	T	S	OZ	P04	S103	N02	N03	DT	Z	T	S	OZ	SIGT	DT	DD
0	23.32	33.971	4.67			.00		479.4	0	23.32	33.971	4.67	23.083	479.4	0
15	23.33	33.967	4.91			.00		480.0	10	23.33	33.969	4.85	23.080	479.8	.048
30	22.54	34.030	5.02			.01		453.9	20	23.32	33.960	4.95	23.075	480.2	.096
45	20.52	34.235	5.17			.00		386.1	30	22.54	34.030	5.02	23.351	453.9	.143
65	18.42	34.090	5.14			.02		345.1	50	19.99	34.221	5.16	24.191	373.7	.226
89	15.25	33.991	3.88			.22		281.5	75	17.16	34.048	4.67	24.766	318.9	.313
114	12.78	33.971	3.10			.02		233.9	100	13.72	33.920	3.45	25.431	255.7	.385
138	11.73	34.207	1.86			.01		197.4	125	11.72	33.970	2.64	25.862	214.7	.445
163	12.54	34.669	.26			.01		178.2	150	12.60	34.520	1.25	26.119	190.2	.496
188	12.00	34.685	.11			.00		167.1	200	11.89	34.716	.07	26.407	162.9	.587
217	11.77	34.752	.05			.00	1.20	158.0	250	11.22	34.713	.04	26.532	151.1	.668
246	11.28	34.719	.04			.64		151.7	300	10.41	34.645	.06	26.623	142.4	.745
281	10.73	34.666	.06			.01		146.2	400	8.31	34.470	.24	26.832	122.6	.884
325	9.93	34.609	.07			.00		137.2	500	7.34	34.485	.09	26.987	107.9	1.007
379	8.58	34.474	.25			.00		126.3	600	6.51	34.482	.11	27.098	97.4	1.118
433	8.00	34.482	.18			.00		117.3	700	5.75	34.489	.13	27.202	87.6	1.220
518	7.17	34.485	.07			.00		105.7	800	5.19	34.501	.16	27.280	80.1	1.313
602	6.50	34.482	.11			.00		97.2							
710	5.68	34.490	.13			.00		86.6							
820	5.10	34.504	.17			.01		79.0							

RV ARGO

LA PARED EXPEDITION

22

LATITUDE 19 28.0N		LONGITUDE 116 01.0W		MO/DAY/YR 05/13/65		MESSENGER TIME 1217		BOTTOM 3854M	WIND 350	SPEED 10KT	WEATHER	DOMINANT WAVES 350 02 10			
Z	T	S	O2	PO4	SI03	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	23.64	33.965	4.77			.00		488.8	0	23.64	33.965	4.77	22.986	488.8	0
25	23.64	33.964	4.90			.00		488.8	10	23.64	33.965	4.83	22.986	488.8	.049
50	21.70	34.360	5.01			.02		407.6	20	23.64	33.965	4.88	22.985	488.8	.098
59	19.81	34.177	4.66			.07		372.5	30	23.14	33.970	4.92	23.134	474.6	.146
69	18.80	34.181	4.74			.09		347.5	50	21.70	34.360	5.01	23.836	407.6	.235
79	17.18	34.127	3.95			.30		313.7	75	17.80	34.138	4.36	24.680	327.2	.327
89	16.58	34.280	2.44			.50		289.1	100	15.96	34.448	1.17	25.352	263.2	.401
99	16.06	34.453	1.17A			.25		265.0	125	14.08	34.542	.50	25.836	217.2	.462
109	14.98	34.398	1.16			.04		246.1	150	13.12	34.625	.28	26.096	192.5	.514
118	14.28	34.504	.71			.02		224.0	200	11.87	34.709	.06	26.408	162.9	.606
128	14.03	34.552	.44			.02		215.5	250	11.24	34.719	.06	26.533	151.0	.687
177	12.12	34.682	.09			.01		169.5	300	10.56	34.670	.05	26.617	143.0	.763
187		34.706	.11			.01									
197	11.89	34.704	.06			.00		163.7							
207		34.706	.06			.00									
217	11.72	34.733	.07			.03		158.5							
227		34.736	.05			.45									
246	11.29	34.724	.04			.53		151.6							
271	10.96	34.691	.15			.03		148.3							
296	10.62	34.674	.05			.23		143.8							
331	10.10	34.642	.08			.02		137.5							
375	9.74	34.631	.07			.25		132.5							

RV ARGO

LA PARED EXPEDITION

23

LATITUDE 20 18.0N		LONGITUDE 116 09.0W		MO/DAY/YR 05/14/65		MESSENGER TIME 1605		BOTTOM 3437M	WIND 360	SPEED 12KT	WEATHER 1	DOMINANT WAVES 350 04 07			
Z	T	S	O2	PO4	SI03	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	22.97	34.004	4.86			.00		467.4	0	22.97	34.004	4.86	23.209	467.4	0
25	22.47	34.027	4.91			.01		452.2	10	22.97	34.000	4.88	23.206	467.7	.047
50	17.67	34.307	2.88			.52		311.7	20	22.32	34.011	4.90	23.398	449.4	.093
60	16.28	34.225	3.01			.40		286.5	30	22.41	34.050	4.90	23.403	448.9	.138
70	15.48	34.227	2.41			.15		269.1	50	17.67	34.307	2.88	24.842	311.7	.214
80	14.42	34.104	2.93			.06		256.1	75	14.93	34.160	2.67	25.360	262.4	.286
90	14.02	34.189	2.39			.03		241.9	100	13.58	34.178	2.22	25.658	234.1	.349
99	13.70	34.195	2.16			.02		235.1	125	11.82	34.120	2.70	25.960	205.4	.405
109	12.36	34.008	2.89			.02		223.4	150	12.15	34.614	.72	26.279	175.1	.453
119	11.36	33.929	3.07			.01		211.4	200	11.02	34.594	.23	26.474	156.5	.538
129	12.68	34.431	1.01			.01		198.3	250	10.42	34.601	.23	26.587	145.8	.616
178	11.44	34.611	.33			.01		162.5	300	9.36	34.501	.37	26.689	136.1	.690
187		34.664	.36			.01									
197	11.05	34.587	.23			.00		157.5							
207		34.647	.23			.00									
217	10.89	34.632	.23			.00		151.4							
226		34.661	.10			.01									
246	10.56	34.623	.17			.01		146.5							
270	9.70	34.493	.49			.00		142.1							
295	9.38	34.495	.40			.01		136.9							
330	9.24	34.535	.20			.00		131.8							
375	8.58	34.521	.17			.00		122.8							

RV ARGO

LA PARED EXPEDITION

24

LATITUDE 20 33.0N		LONGITUDE 116 11.0W		MO/DAY/YR 05/15/65		MESSENGER 0850		TIME GMT	BOTTOM 3940M	WIND 020	SPEED 13KT	WEATHER 1	DOMINANT WAVES 350 06 08		
Z	T	S	O2	PO4	SI03	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
0	22.07	34.158	4.92			.01		432.0	0	22.07	34.158	4.92	23.580	432.0	0
14	22.08	34.155	5.01			.01		432.5	10	22.08	34.156	4.99	23.576	432.4	.043
28	21.91	34.192	5.02			.00		425.3	20	22.02	34.173	5.01	23.604	429.7	.086
43	19.98	34.172	5.37			.00		377.1	30	21.88	34.192	5.03	23.659	424.5	.129
61	18.37	34.072	5.13			.00		345.2	50	19.30	34.139	5.28	24.306	362.7	.208
85	15.72	33.982	4.25			.25		292.1	75	16.85	34.004	4.69	24.806	315.2	.293
109	13.24	34.065	2.74			.03		235.8	100	14.07	34.017	3.31	25.433	255.5	.365
132	12.30	34.220	1.86			.00		206.7	125	12.53	34.177	2.06	25.868	214.1	.425
155	11.08	34.269	1.67			.01		181.5	150	11.32	34.258	1.70	26.160	186.4	.476
178	10.72	34.410	.98			.01		164.9	200	10.55	34.505	.55	26.490	155.0	.563
206	10.52	34.525	.47			.00		153.1	250	9.97	34.557	.31	26.631	141.6	.640
233	10.40	34.592	.27			.01		146.1	300	9.29	34.545	.25	26.736	131.7	.711
265	9.56	34.519	.36			.01		137.9	400	7.80	34.478	.21	26.915	114.7	.841
306	9.26	34.552	.23			.01		130.8	500	7.06	34.486	.18	27.027	104.1	.957
355	8.41	34.500	.20			.00		121.9	600	6.28	34.482	.18	27.128	94.5	1.065
405	7.74	34.477	.21			.00		114.0	700	5.65	34.494	.20	27.218	86.0	1.164
483	7.20	34.488	.18			.00		105.9							
561	6.56	34.479	.18			.00		98.2							
666	5.86	34.491	.17			.00		88.7							
774	5.24	34.498	.30			.01		81.0							

A) ALTERNATE OXYGEN VALUE, 1.03.

RV ARGO

LA PARED EXPEDITION

25

LATITUDE 22 59.0N			LONGITUDE 111 00.0W			MO/DAY/YR 05/17/65		MESSENGER 1859		TIME GMT	BOTTOM 2052M	WIND 340	SPEED 07KT	WEATHER 1	DOMINANT WAVES 320 03 04		
Z	T	S	O2	P04	SI03	N02	N03	DT	Z	T	S	O2	SI03	DT	DO		
0	16.47	33.974	6.30	.32		.02		309.0	0	16.47	33.974	6.30	24.871	309.0	0		
14	15.66	33.899	5.45	.43		.07		296.9	10	15.93	33.920	5.74	24.953	301.1	.031		
28	15.42	33.907	5.16	.64		.20		291.2	20	15.51	33.898	5.26	25.030	293.8	.060		
42	14.86	33.868	4.77			.29		282.4	30	15.37	33.902	5.13	25.063	290.6	.090		
60	13.02	33.888	3.22	1.41		.19		244.6	50	14.20	33.870	4.22	25.292	268.9	.146		
83	12.90	34.287	1.38	2.09		.03		213.0	75	12.94	34.183	1.91	25.791	221.5	.207		
106	12.52	34.477	.88	2.44		.04		191.9	100	12.61	34.435	.95	26.053	196.6	.260		
129	12.67	34.716	.29	2.82		.01		177.1	125	12.65	34.681	.38	26.234	179.3	.308		
151	12.20	34.739	.10	2.76		.00		166.7	150	12.22	34.741	.10	26.363	167.1	.352		
175	12.00	34.732	.13	2.75		.01		163.6	200	11.65	34.726	.12	26.461	157.8	.436		
202	11.62	34.725	.12	2.82		.00		157.3	250	10.86	34.694	.09	26.581	146.4	.514		
228	11.22	34.714	.04	2.84		.02		151.1	300	10.18	34.651	.08	26.668	138.1	.589		
260	10.70	34.683	.12	2.86		.19		144.4	400	8.77	34.542	.16	26.817	124.1	.727		
300	10.18	34.651	.08	3.09		.33		138.1	500	7.50	34.507	.11	26.981	106.5	.851		
350	9.44	34.597	.13	3.04		.00		130.3	600	6.60	34.489	.13	27.092	98.0	.963		
399	8.78	34.542	.16	3.11		.00		124.2	700	5.80	34.494	.16	27.199	87.8	1.065		
474	7.80	34.520	.11			.00		111.7									
550	6.98	34.485	.13			.00		103.2									
647	6.27	34.497	.13			.00		93.2									
747	5.34	34.486	.21			.00		83.0									

STUDENT TRAINING CRUISE

This training cruise, supported by the Department of SIO of the University of California, consisted of a series of closely spaced STD lowerings in Sebastian Vizcaino Bay. In addition to the hydrographic cast and STD data reported herein, 144 drift bottles were released, 2 surface zooplankton samples were collected, and 36 double one-meter oblique net hauls and 11 chlorophyll casts to approximately 60 m were made.

A surface bucket temperature and salinity sample were obtained with each STD lowering, and 11 Nansen bottle casts of 6 to 10 bottles were made with phosphate, nitrate and nitrite determined for each cast.

The STD data is reported without correction, since the analog recordings and surface data agreed well. The Nansen cast data did not agree as well, but rapid changes were indicated when the STD was lowered more than once at a station.

Personnel participating in the collection of data were:

Ship's Captain:

Phinney, Alan W.
RV Argo

Scientific personnel:

McGowan, Dr. J. A. (Chief scientist)
Blankley, W. F.
Born, R. M.
Daniel, D. A.
Evans, M.
Felix, D. W.
Grenness, O.
Hacker, P. W.
Hart, J. T.
Krajewski, R. J.
Lawson, J. B.
Mantyla, A. W.
McGeary, D. F.
Monteiro, J. H.
Nierenberg, Dr. W. A.
Preslan, W. L.
Rodrigues, D. A.
Silver, E. A.
Wiebe, P. H.
Wilson, P. G.
Wirth, D.
Wooster, Dr. W. S.
Young, D. R.

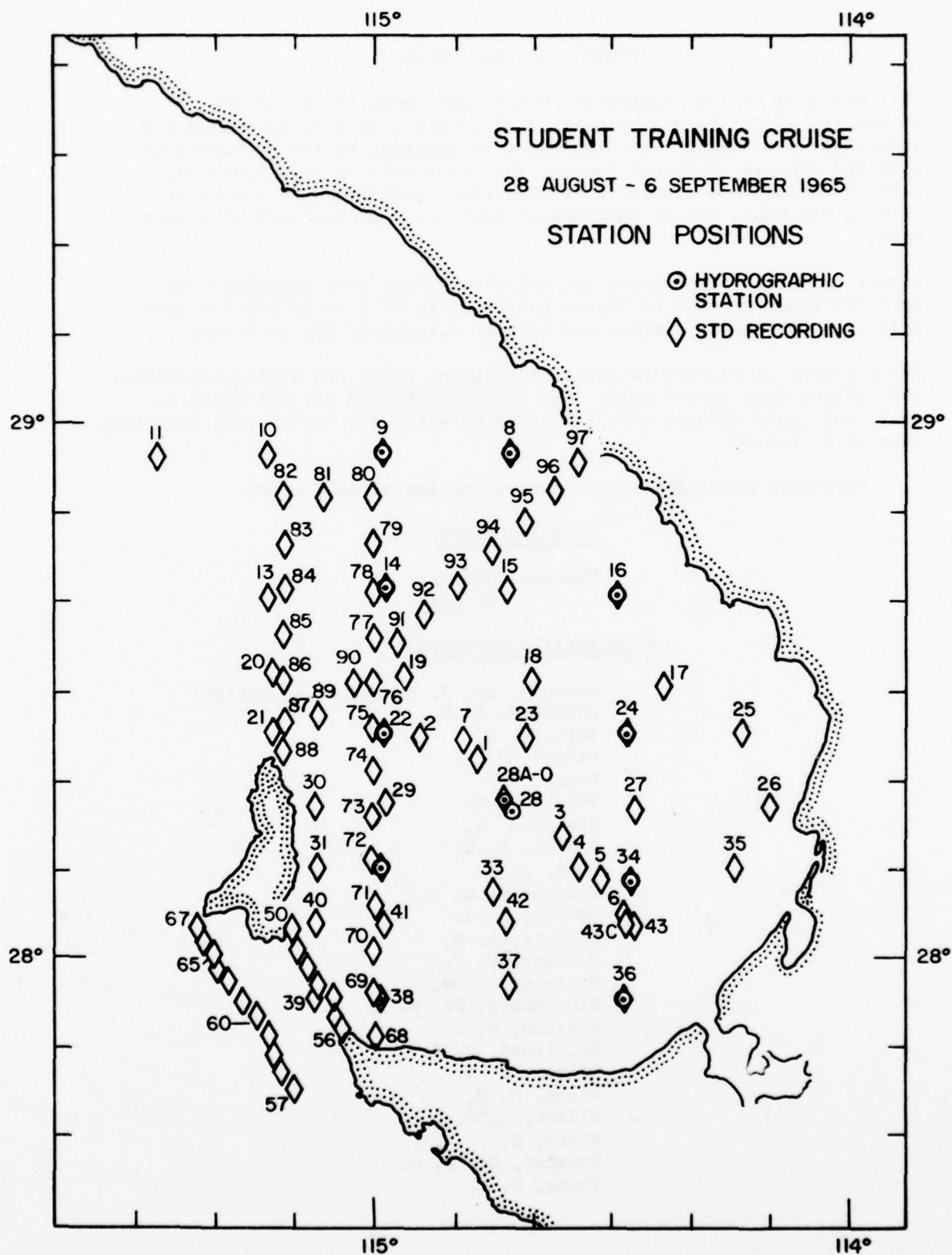


FIGURE 3

6508 STUDENT TRAINING CRUISE

Station Positions

Chronological Order

Date 1965	Station	Latitude North	Longitude West
Aug. 28	43 A-B	28°04.0'	114°27.0'
29	42	28°04.0'	114°43.5'
29	41	28°04.0'	114°58.5'
29	40	28°04.0'	115°07.0'
29	39	27°56.0'	115°07.0'
29	38	27°56.0'	114°59.0'
29	37	27°57.0'	114°43.0'
29	36	27°55.5'	114°28.5'
29	43 C	28°04.0'	114°28.0'
29	35	28°10.5'	114°14.5'
29	35 A	28°10.0'	114°13.5'
30	34	28°10.0'	114°28.5'
30	33	28°10.5'	114°43.0'
30	32	28°10.5'	114°58.0'
30	31	28°10.0'	115°06.5'
30	30 B-C	28°17.5'	115°06.5'
30	29	28°17.5'	114°58.5'
30	28	28°17.5'	114°43.5'
30	27	28°17.5'	114°28.0'
30	26	28°17.0'	114°13.0'

Date 1965	Station	Latitude North	Longitude West
Aug. 30	25	28°25.5'	114°13.5
30	24	28°25.5'	114°28.0'
30	23 A-C	28°25.5'	114°43.0'
30	22	28°25.5'	114°58.5'
31	21	28°26.0'	115°12.5'
31	20	28°33.0'	115°27.5'
31	19	28°33.0'	114°58.5'
31	18	28°33.0'	114°43.0'
31	17	28°33.0'	114°28.5'
31	16	28°41.0'	114°29.0'
31	15	28°41.0'	114°43.5'
31	14	28°40.0'	114°58.0'
31	13	28°40.5'	115°13.0'
31	12	28°41.5'	115°26.0'
31	11	28°56.0'	115°27.5'
31	10	28°56.0'	115°13.0'
31	9	28°56.0'	114°58.5'
31	8	28°56.5'	114°42.5'
Sept. 1	7 A-I	28°23.0'	114°49.0'
1	1 A-D	28°22.5'	114°47.5'
2	2 A-D	28°25.0'	114°54.0'
2	3 A-D	28°14.0'	114°36.0'
2	4 A-D	28°10.5'	114°34.0'
2	5 A-D	28°09.0'	114°31.0'
3	6 A-D	28°04.5'	114°28.0'

Date 1965	Station	Latitude North	Longitude West
Sept. 3	28 A-L	28°18.0	114°43.0'
4	28 M	28°18.0'	114°43.0'
4	28 N-P	28°17.5'	114°43.0'
5	50	28°03.5'	115°10.5'
5	51	28°01.5'	115°09.0'
5	52	27°59.5'	115°08.0'
5	53	27°57.5'	115°07.0'
5	54	27°55.5'	115°05.5'
5	55	27°53.5'	115°04.5'
5	56	27°53.0'	115°04.0'
5	57	27°46.0'	115°10.0'
5	58	27°47.5'	115°11.0'
5	59	27°49.0'	115°12.0'
5	60	27°52.0'	115°13.5'
5	61	27°54.0'	115°14.5'
5	62	27°55.5'	115°16.0'
5	63	27°58.0'	115°18.0'
5	64	27°59.0'	115°19.5'
5	65	28°00.5'	115°20.0'
5	66	28°02.5'	115°21.0'
5	67	28°04.0'	115°22.0'
5	68	27°51.0'	115°00.5'
6	69	27°56.0'	115°00.0'
6	70	28°01.0'	115°00.0'
6	71	28°06.0'	115°00.0'

Date 1965	Station	Latitude North	Longitude West
Sept. 6	72	28°11.0'	115°00.0'
6	73	28°16.0'	115°00.0'
6	73 A	28°16.0'	115°00.0'
6	74	28°21.0'	115°00.0'
6	75	28°26.0'	115°00.0'
6	76	28°31.5'	115°00.0'
6	77	28°36.5'	115°00.0'
6	78	28°41.5'	115°00.0'
6	79	28°46.5'	115°00.0'
6	80	28°51.5'	115°00.0'
6	81	28°51.5'	115°05.5'
6	82	28°51.5'	115°11.5'
6	83	28°46.5'	115°11.5'
6	84	28°41.5'	115°11.5'
6	85	28°36.5'	115°11.5'
6	85 B	28°36.5'	115°11.5'
6	86	28°31.5'	115°11.5'
6	87	28°26.5'	115°11.5'
6	88	28°23.5'	115°11.5'
6	89	28°27.0'	115°07.0'
6	90	28°31.0'	115°02.5'
6	91	28°35.0'	114°57.5'
6	92	28°39.0'	114°53.5'
6	93	28°42.0'	114°49.5'
6	94	28°45.5'	114°45.0'

Date 1965	Station	Latitude North	Longitude West
Sept. 6	95	28°49.0'	114°41.0'
6	96	28°52.5'	114°37.0'
6	97	28°55.5'	114°34.0'

RV ARGO 6508 STUDENT TRAINING CRUISE 1 A

LATITUDE 28 22.5N			LONGITUDE 114 47.5W			MO/DAY/YR 09/01/65		MESSENGER TIME 2007		BOTTOM 101M	WIND 320	SPEED 13KT	WEATHER 1	DOMINANT WAVES 310 04		
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD	
0	20.04	33.77											23.835	407.7	0	
10	18.68	33.67											24.107	381.8	.039	
20	17.66	33.61											24.311	362.3	.077	
30	16.98	33.62											24.481	346.1	.112	
50	14.95	33.60											24.924	303.9	.177	
75	12.95	33.65											25.378	260.7	.248	
100	11.94	33.95											25.805	220.1	.309	

RV ARGO 6508 STUDENT TRAINING CRUISE 1 B

LATITUDE 28 22.5N			LONGITUDE 114 47.5W			MO/DAY/YR 09/01/65		MESSENGER TIME 2104		BOTTOM 101M	WIND	SPEED	WEATHER	DOMINANT WAVES		
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD	
0	20.16	33.78											23.811	410.0	0	
10	19.30	33.71											23.981	393.8	.040	
20	18.34	33.65											24.176	375.2	.079	
30	16.74	33.62											24.537	340.7	.115	
50	15.07	33.59											24.891	307.1	.180	
75	13.16	33.64											25.328	265.4	.252	
100	11.99	33.95											25.796	221.0	.313	

RV ARGO 6508 STUDENT TRAINING CRUISE 1 C

LATITUDE 28 22.5N			LONGITUDE 114 47.5W			MO/DAY/YR 09/01/65		MESSENGER TIME 2207		BOTTOM 101M	WIND	SPEED	WEATHER	DOMINANT WAVES		
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD	
0	20.14	33.76											23.801	410.9	0	
10	18.90	33.69											24.067	385.6	.040	
20	18.38	33.62											24.143	378.3	.078	
30	16.60	33.58											24.539	340.6	.114	
50	14.57	33.61											25.014	295.4	.178	
75	12.98	33.64											25.364	262.0	.248	
100	12.06	33.95											25.783	222.2	.309	

RV ARGO 6508 STUDENT TRAINING CRUISE 1 D

LATITUDE 28 22.5N			LONGITUDE 114 47.5W			MO/DAY/YR 09/01/65		MESSENGER TIME 2250		BOTTOM 97M	WIND 320	SPEED 15KT	WEATHER 1	DOMINANT WAVES 320 04		
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD	
0	20.10	33.76											23.811	409.9	0	
10	18.94	33.64											24.019	390.2	.040	
20	18.24	33.61											24.170	375.7	.078	
30	16.75	33.57											24.497	344.6	.114	
50	14.85	33.59											24.938	302.5	.179	
75	13.19	33.63											25.315	266.7	.251	
100A	12.12	33.94											25.763	224.1	.313	

RV ARGO 6508 STUDENT TRAINING CRUISE 2 A

LATITUDE 28 25.0N			LONGITUDE 114 54.0W			MO/DAY/YR 09/02/65		MESSENGER TIME 0225		BOTTOM 97M	WIND	SPEED	WEATHER	DOMINANT WAVES		
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD	
0	19.86	33.78											23.889	402.5	0	
10	19.80	33.76											23.890	402.5	.040	
20	18.29	33.62											24.165	376.2	.079	
30	16.76	33.58											24.502	344.1	.115	
50	14.97	33.60											24.920	304.3	.180	
75	13.29	33.62											25.287	269.4	.253	

AT THE FATHOMETER READING DURING S/T/O 1A INDICATED A DEPTH OF 101 METERS.

RV ARGO 6508 STUDENT TRAINING CRUISE 2 B

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
28 25.0N		114 54.0W		09/02/65		0415		GMT	95M	330	16KT	1	320 06		
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD
									0	19.80	33.78		23.905	401.0	0
									10	19.77	33.77		23.905	401.0	.030
									20	18.69	33.62		24.066	385.6	.079
									30	16.98	33.56		24.435	350.5	.116
									50	14.94	33.61		24.934	302.9	.182
									75	13.19	33.63		25.315	266.7	.254

RV ARGO 6508 STUDENT TRAINING CRUISE 2 C

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
28 25.0N		114 54.0W		09/02/65		0523		GMT	95M						
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.05	33.79		23.847	406.5	0
									10	19.85	33.78		23.892	402.2	.040
									20	18.12	33.57		24.169	375.8	.079
									30	16.58	33.58		24.544	340.1	.115
									50	14.90	33.62		24.951	301.4	.180
									75	13.21	33.63		25.310	267.1	.251

RV ARGO 6508 STUDENT TRAINING CRUISE 2 D

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
28 25.0N		114 54.0W		09/02/65		0613		GMT	95M						
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD
									0	19.80	33.78		23.905	401.0	0
									10	19.76	33.77		23.908	400.7	.040
									20	18.98	33.65		24.016	390.4	.080
									30	17.38	33.63		24.394	354.4	.117
									50	15.15	33.61		24.888	307.3	.183
									75	13.40	33.61		25.257	272.2	.256

RV ARGO 6508 STUDENT TRAINING CRUISE 3 A

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
28 14.0N		114 36.0W		09/02/65		0823		GMT	93M	320	11KT	1	320		
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD
									0	19.98	33.77		23.850	406.2	0
									10	19.98	33.76		23.843	406.9	.041
									20	18.80	33.63		24.046	387.5	.080
									30	17.68	33.58		24.284	364.9	.118
									50	15.86	33.56		24.693	325.9	.187
									75	13.60	33.58		25.193	278.3	.263

RV ARGO 6508 STUDENT TRAINING CRUISE 3 B

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
28 14.0N		114 36.0W		09/02/65		0957		GMT	93M						
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD
									0	19.95	33.77		23.858	405.5	0
									10	19.85	33.73		23.854	405.9	.041
									20	18.25	33.67		24.213	371.6	.080
									30	17.57	33.59		24.318	361.6	.116
									50	15.90	33.57		24.691	326.1	.185
									75	13.40	33.61		25.257	272.2	.260

RV ARGO 6508 STUDENT TRAINING CRUISE 3 C

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
28 14.0N		114 36.0W		09/02/65		1103		GMT	93M						
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD
									0	19.93	33.77		23.864	405.0	0
									10	19.55	33.72		23.924	399.2	.040
									20	18.97	33.68		24.041	388.0	.080
									30	17.50	33.63		24.365	357.1	.117
									50	15.74	33.56		24.720	323.4	.185
									75	13.48	33.62		25.248	273.0	.260

RV ARGO 6508 STUDENT TRAINING CRUISE 3 D

LATITUDE		LONGITUDE		MO/DAY/YR	MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
28 14.0N		114 36.0W		09/02/65	1220		GMT	93M	340	11KT	1	320			
Z	T	S	02	PO4	S103	NO2	NO3	DT	Z	T	S	02	SIGT	DT	DD
									0	19.90	33.76		23.864	404.9	0
									10	19.34	33.69		23.955	396.2	.040
									20	19.06	33.69		24.026	389.4	.079
									30	17.87	33.67		24.306	362.7	.117
									50	15.72	33.56		24.724	322.9	.186
									75	13.39	33.66		25.297	268.4	.260

RV ARGO 6508 STUDENT TRAINING CRUISE 4 A

LATITUDE		LONGITUDE		MO/DAY/YR	MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
28 10.5N		114 34.0W		09/02/65	1450		GMT	90M							
Z	T	S	02	PO4	S103	NO2	NO3	DT	Z	T	S	02	SIGT	DT	DD
									0	19.85	33.74		23.862	405.1	0
									10	19.35	33.70		23.960	395.7	.040
									20	19.00	33.67		24.026	389.4	.079
									30	17.67	33.52		24.240	369.0	.117
									50	15.58	33.56		24.755	320.0	.187
									75	13.45	33.73		25.339	264.4	.260

RV ARGO 6508 STUDENT TRAINING CRUISE 4 B

LATITUDE		LONGITUDE		MO/DAY/YR	MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
28 10.5N		114 34.0W		09/02/65	1531		GMT	90M							
Z	T	S	02	PO4	S103	NO2	NO3	DT	Z	T	S	02	SIGT	DT	DD
									0	19.70	33.74		23.900	401.4	0
									10	19.15	33.68		23.996	392.3	.040
									20	18.28	33.62		24.168	375.9	.078
									30	16.98	33.54		24.420	351.9	.115
									50	15.58	33.58		24.771	318.5	.182
									75	13.52	33.78		25.364	262.1	.255

RV ARGO 6508 STUDENT TRAINING CRUISE 4 C

LATITUDE		LONGITUDE		MO/DAY/YR	MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
28 10.5N		114 34.0W		09/02/65	1612		GMT	88M							
Z	T	S	02	PO4	S103	NO2	NO3	DT	Z	T	S	02	SIGT	DT	DD
									0	19.85	33.74		23.862	405.1	0
									10	19.10	33.68		24.009	391.1	.040
									20	18.95	33.68		24.047	387.5	.079
									30	17.28	33.59		24.387	355.0	.116
									50	15.73	33.58		24.737	321.7	.184
									75	13.67	33.73		25.294	268.7	.258

RV ARGO 6508 STUDENT TRAINING CRUISE 4 D

LATITUDE		LONGITUDE		MO/DAY/YR	MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
28 10.5N		114 34.0W		09/02/65	1651		GMT	88M	360	10KT	1	320 03			
Z	T	S	02	PO4	S103	NO2	NO3	DT	Z	T	S	02	SIGT	DT	DD
									0	19.86	33.76		23.874	403.9	0
									10	19.41	33.70		23.945	397.2	.040
									20	19.29	33.70		23.975	394.3	.080
									30	17.47	33.62		24.365	357.2	.117
									50	15.50	33.57		24.781	317.5	.185
									75	13.81	33.71		25.250	272.9	.259

RV ARGO 6508 STUDENT TRAINING CRUISE 5 A

LATITUDE		LONGITUDE		MO/DAY/YR	MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
28 09.0N		114 31.0W		09/02/65	2059		GMT	82M							
Z	T	S	02	PO4	S103	NO2	NO3	DT	Z	T	S	02	SIGT	DT	DD
									0	20.36	33.75		23.735	417.2	0
									10	19.00	33.68		24.034	388.7	.040
									20	17.72	33.60		24.289	364.4	.078
									30	16.73	33.59		24.516	342.7	.113
									50	15.28	33.61		24.860	310.0	.179
									75	13.90	33.71		25.232	274.6	.252

RV ARGO 6508 STUDENT TRAINING CRUISE 6 D

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
28 04.5N		114 28.0W		09/03/65		0610		69M	020	04KT					
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD
									0	20.35	33.76		23.746	416.2	0
									10	19.76	33.70		23.855	405.8	.041
									20	18.96	33.67		24.036	388.5	.081
									30	17.74	33.63		24.307	362.6	.119
									50	15.82	33.63		24.755	320.0	.187

RV ARGO 6508 STUDENT TRAINING CRUISE 7 A

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
28 23.0N		114 49.0W		09/01/65		0425		104M	310	15KT	1				
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD
									0	19.32	33.73		23.991	392.8	0
									10	19.18	33.73		24.026	389.4	.039
									20	18.60	33.66		24.119	380.6	.078
									30	17.00	33.58		24.446	349.5	.114
									50	15.04	33.61		24.912	305.0	.180
									75	12.76	33.65		25.415	257.2	.251
									100	12.00	33.94		25.786	221.9	.311

RV ARGO 6508 STUDENT TRAINING CRUISE 7 B

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
28 23.0N		114 49.0W		09/01/65		0503		104M							
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD
									0	19.41	33.73		23.968	395.0	0
									10	19.31	33.73		23.993	392.6	.039
									20	18.58	33.65		24.116	380.8	.078
									30	16.78	33.58		24.497	344.6	.114
									50	15.30	33.61		24.856	310.4	.180
									75	12.68	33.65		25.431	255.7	.251
									100	11.96	33.94		25.794	221.2	.312

RV ARGO 6508 STUDENT TRAINING CRUISE 7 C

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
28 23.0N		114 49.0W		09/01/65		0609		104M							
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD
									0	19.39	33.72		23.965	395.3	0
									10	19.16	33.70		24.009	391.1	.039
									20	18.57	33.65		24.119	380.6	.078
									30	16.97	33.55		24.430	351.0	.115
									50	15.39	33.59		24.820	313.8	.181
									75	12.49	33.66		25.476	251.4	.252
									100	11.90	33.95		25.813	219.4	.312

RV ARGO 6508 STUDENT TRAINING CRUISE 7 D

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
28 23.0N		114 49.0W		09/01/65		0731		104M	320	11KT	0				
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD
									0	19.56	33.74		23.937	398.0	0
									10	19.18	33.72		24.019	390.2	.039
									20	18.64	33.69		24.132	379.4	.078
									30	17.32	33.56		24.355	358.1	.115
									50	15.77	33.58		24.728	322.5	.183
									75	12.95	33.65		25.378	260.7	.257
									100	11.97	33.94		25.792	221.4	.317

RV ARGO 6508 STUDENT TRAINING CRUISE 7 E

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
28 23.0N		114 49.0W		09/01/65		0904		104M							
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD
									0	19.95	33.80		23.881	403.3	0
									10	19.04	33.72		24.054	386.8	.040
									20	17.75	33.59		24.274	365.8	.077
									30	16.67	33.60		24.538	340.7	.113
									50	15.03	33.60		24.907	305.5	.177
									75	12.54	33.67		25.474	251.6	.247

RV ARGO										6508 STUDENT TRAINING CRUISE										9
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES						
28 56.0N		114 58.5W		08/31/65		2045		GMT		93M	300	12KT	2	320 05						
Z	T	S	02	P04	S103	N02	N03	DT		Z	T	S	02	SIGT	DT	DD				
										0	18.94	33.75		24.102	382.2	0				
										10	17.45	33.63		24.377	356.0	.037				
										20	16.75	33.65		24.558	338.8	.072				
										30	15.58	33.60		24.786	317.0	.105				
										50	14.05	33.62		25.131	284.2	.165				
										75	12.05	33.78		25.653	234.6	.230				

RV ARGO										6508 STUDENT TRAINING CRUISE										9
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES						
28 56.0N		114 58.5W		08/31/65		2135		GMT		93M	300	12KT	2	320 05						
Z	T	S	02	P04	S103	N02	N03	DT		Z	T	S	02	SIGT	DT	DD				
0	19.02	33.707	5.76	.17		.00	.0	387.2		0	19.02	33.707	5.76	24.049	387.2	0				
5	19.01	33.714	5.96	.13		.01	.0	386.5		10	18.74	33.695	5.99	24.111	381.4	.038				
10	18.74	33.695	5.99	.10		.00	.0	381.4		20	16.23	33.595	5.97	24.636	331.4	.074				
20	16.23	33.595	5.97	.40		.00	.1	331.4		30	15.57	33.569	5.78	24.764	319.1	.107				
30	15.57	33.569	5.78	.36		.00	.0	319.1		50	13.30	33.607	5.54	25.275	270.5	.166				
40	14.68	33.588	5.87	.43		.08	.8	299.2		75	12.10	33.760	4.73	25.628	237.0	.230				
59	13.26	33.627	5.14	.75		.09	6.2	268.3												
79	11.95	33.699U	4.66	1.30		.02	13.9													

RV ARGO										6508 STUDENT TRAINING CRUISE										10
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES						
28 56.0N		115 13.0W		08/31/65		1910		GMT		201M	340	09KT	2	340 05						
Z	T	S	02	P04	S103	N02	N03	DT		Z	T	S	02	SIGT	DT	DD				
										0	19.27	33.70		23.981	393.8	0				
										10	19.25	33.70		23.986	393.3	.039				
										20	19.23	33.71		23.998	392.1	.079				
										30	17.30	33.53		24.336	359.9	.116				
										50	14.68	33.57		24.959	300.5	.183				
										75	13.28	33.63		25.296	268.5	.254				
										100	11.84	33.81		25.716	228.6	.317				
										125	11.15	34.00		25.990	202.5	.371				
										150	11.03	34.04		26.043	197.5	.422				

RV ARGO										6508 STUDENT TRAINING CRUISE										11
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES						
28 56.0N		115 27.5W		08/31/65		1727		GMT		1271M	320	19KT	2	320 04 05						
Z	T	S	02	P04	S103	N02	N03	DT		Z	T	S	02	SIGT	DT	DD				
										0	19.28	33.68		23.963	395.5	0				
										10	19.28	33.68		23.963	395.5	.040				
										20	19.18	33.68		23.988	393.1	.079				
										30	18.80	33.65		24.061	386.1	.118				
										50	17.23	33.60		24.407	353.2	.192				
										75	13.96	33.69		25.204	277.3	.272				
										100	13.01	33.80		25.482	250.8	.338				
										125	12.45	33.91		25.677	232.3	.399				
										150	11.74	34.10		25.959	205.5	.455				
										200	11.22	34.30		26.210	181.6	.554				
										250	10.71	34.44		26.411	162.5	.642				
										300	10.19	34.51		26.557	148.7	.723				

RV ARGO										6508 STUDENT TRAINING CRUISE										12
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES						
28 41.5N		115 26.0W		08/31/65		1542		GMT		606M	330	15KT	1	320 04 05						
Z	T	S	02	P04	S103	N02	N03	DT		Z	T	S	02	SIGT	DT	DD				
										0	19.53	33.70		23.914	400.2	0				
										10	19.51	33.70		23.919	399.7	.040				
										20	19.14	33.68		23.998	392.1	.080				
										30	18.53	33.68		24.152	377.5	.118				
										50	17.40	33.63		24.389	354.9	.192				
										75	15.01	33.84		25.096	287.6	.272				
										100	13.23	33.90		25.515	247.7	.340				
										125	12.28	33.90		25.702	229.9	.400				
										150	11.52	34.03		25.946	206.7	.456				
										200	10.43	34.23		26.297	173.4	.553				
										250	10.22	34.42		26.481	155.9	.638				
										300	9.96	34.50		26.588	145.7	.716				

RV ARGO										6508 STUDENT TRAINING CRUISE										13	
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES									
28 40.5N		115 13.0W		08/31/65		1420		190M	310	14KT	2	320 03									
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD						
									0	19.69	33.68		23.857	405.5	0						
									10	19.69	33.68		23.857	405.5	.041						
									20	19.66	33.68		23.865	404.8	.081						
									30	18.56	33.62		24.099	382.5	.121						
									50	16.58	33.55		24.521	342.3	.193						
									75	14.29	33.60		25.065	290.4	.273						
									100	12.93	33.65		25.382	260.4	.342						
									125	11.74	33.97		25.858	215.0	.402						
									150	11.54	34.04		25.950	206.3	.456						

RV ARGO			6508 STUDENT TRAINING CRUISE													14
LATITUDE 28 40.0N			LONGITUDE 114 58.0W		MO/DAY/YR 08/31/65		MESSENGER 1230		TIME GMT	BOTTOM 127M	WIND 310	SPEED 13KT	WEATHER 2	DOMINANT WAVES 320 02		
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD	
0	19.16	33.665	5.56	.29		.00	.0	393.7	0	19.16	33.665	5.56	23.982	393.7	0	
5	19.14	33.665	5.56	.30		.01	.0	393.2	10	19.16	33.667	5.53	23.983	393.5	.039	
10	19.16	33.667	5.53	.26		.01	.0	393.5	20	19.03	33.665	5.52	24.015	390.5	.079	
20	19.03	33.665	5.52	.24		.00	.0	390.5	30	17.11	33.537	5.81	24.388	355.0	.116	
29	17.28	33.549	5.82	.32		.00	.0	358.0	50	15.23	33.489	5.75	24.777	317.9	.184	
40	15.70	33.457	5.65	.34		.00	.0	330.0	75	13.49	33.618	5.25	25.244	273.5	.258	
58	15.02	33.540	5.80	.38		.00	.0	309.7								
78	13.20	33.634	5.09	.82		.12	6.4	266.6								
96	11.95	33.741	3.70	1.51		.02	17.2	235.7								

RV ARGO				6508 STUDENT TRAINING CRUISE												14
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES				
28 40.0N		114 58.0W		08/31/65		1250		127M	310	13KT	2	320 02				
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD	
									0	18.97	33.66		24.026	389.4	0	
									10	18.94	33.66		24.034	388.7	.039	
									20	18.78	33.66		24.074	384.9	.078	
									30	17.35	33.56		24.348	358.8	.115	
									50	15.26	33.44		24.734	322.0	.183	
									75	13.09	33.64		25.342	264.1	.257	
									100	11.51	33.88		25.831	217.6	.318	

RV ARGO										6508 STUDENT TRAINING CRUISE										15	
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES									
28 41.0N		114 43.5W		08/31/65		1045		101M	310	14KT	4	320 02									
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD						
									0	20.08	33.79		23.840	407.3	0						
									10	20.09	33.80		23.844	406.8	.041						
									20	15.83	33.58		24.715	323.8	.077						
									30	13.81	33.52		25.104	286.8	.108						
									50	12.51	33.66		25.472	251.8	.162						
									75	11.83	33.90		25.787	221.8	.222						
									100	11.68	33.93		25.839	216.9	.277						

RV ARGO			6508 STUDENT TRAINING CRUISE													16	
LATITUDE 28 41.0N		LONGITUDE 114 29.0W		MO/DAY/YR 08/31/65		MESSENGER TIME 0905 GMT		BOTTOM 88M	WIND 320	SPEED 08KT	WEATHER 1	DOMINANT WAVES 340 03					
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD		
0	20.54	33.776	5.57	.20		.02	.0	419.9	0	20.54	33.776	5.57	23.707	419.9	0		
5	20.54	33.774	5.49	.22		.02	.0	420.0	10	20.54	33.774	5.51	23.706	420.0	.042		
10	20.54	33.774	5.51	.30		.01	.0	420.0	20	16.64	33.585	5.91	24.534	341.1	.080		
20	16.64	33.585	5.91	.30		.02	.0	341.1	30	15.50	33.544	5.60	24.761	319.4	.113		
30	15.50	33.544	5.60	.48		.04	.3	319.4	50	13.18	33.608	4.78	25.300	268.2	.172		
40	14.58	33.534	5.56	.57		.26	.7	301.1	75	12.31	33.809	2.83	25.625	237.2	.236		
50	13.18	33.608	4.78	.88		.38	6.3	268.2									
60	12.52	33.641	4.30	1.15		.18	11.3	253.4									
80	12.24	33.843	2.14	2.07		.05	18.6	233.4									

RV ARGO 6508 STUDENT TRAINING CRUISE 16

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
28 41.0N	114 29.0W	08/31/65	0912	88M	320	08KT	1	340 03	
Z	T	S	02	P04 S103	N02 N03	DT	Z	T	
							S	02	
							SIGT	DT	
							DD		
				0	20.44	33.78		23.737	417.0
				10	20.39	33.77		23.743	416.5
				20	16.35	33.55		24.574	337.3
				30	15.21	33.52		24.806	315.1
				50	12.98	33.61		25.341	264.2
				75	12.31	33.85		25.657	234.1

RV ARGO 6508 STUDENT TRAINING CRUISE 17

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
28 33.0N	114 28.5W	08/31/65	0725	84M	320	10KT	4	340 03	
Z	T	S	02	P04 S103	N02 N03	DT	Z	T	
							S	02	
							SIGT	DT	
							DD		
				0	20.08	33.75		23.809	410.2
				10	20.07	33.75		23.812	409.9
				20	18.92	33.67		24.270	366.2
				30	16.68	33.71		24.620	332.9
				50	14.17	33.57		25.067	290.2
				75	12.92	33.80		25.500	249.1

RV ARGO 6508 STUDENT TRAINING CRUISE 18

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
28 33.0N	114 43.0W	08/31/65	0545	101M	290	11KT	1	320 03	
Z	T	S	02	P04 S103	N02 N03	DT	Z	T	
							S	02	
							SIGT	DT	
							DD		
				0	20.53	33.83		23.751	415.7
				10	20.53	33.83		23.751	415.7
				20	20.16	33.72		23.765	414.3
				30	15.37	33.68		24.894	306.8
				50	13.19	33.67		25.345	263.8
				75	11.80	33.82		25.731	227.2
				100	11.08	34.04		26.034	198.4

RV ARGO 6508 STUDENT TRAINING CRUISE 19

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
28 33.0N	114 58.5W	08/31/65	0418	127M	270	12KT	1	290 03	
Z	T	S	02	P04 S103	N02 N03	DT	Z	T	
							S	02	
							SIGT	DT	
							DD		
				0	18.71	33.68		24.107	381.8
				10	18.52	33.67		24.147	378.0
				20	17.18	33.61		24.426	351.3
				30	16.12	33.60		24.665	328.6
				50	14.95	33.63		24.947	301.7
				75	13.10	33.64		25.340	264.3
				100	11.56	33.90		25.838	217.0

RV ARGO 6508 STUDENT TRAINING CRUISE 20

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
28 33.0N	115 27.5W	08/31/65	0244	142M	280	11KT	1	270 03	
Z	T	S	02	P04 S103	N02 N03	DT	Z	T	
							S	02	
							SIGT	DT	
							DD		
				0	19.81	33.68		23.826	408.5
				10	19.81	33.68		23.826	408.5
				20	19.51	33.68		23.904	401.1
				30	18.21	33.62		24.185	374.3
				50	16.65	33.56		24.512	343.1
				75	14.72	33.60		24.974	299.1
				100	12.82	33.72		25.458	253.1

RV ARGO 6508 STUDENT TRAINING CRUISE 21

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
28 26.0N	115 12.5W	08/31/65	0129	119M	270	12KT	0	320 02	
Z	T	S	02	P04 S103	N02 N03	DT	Z	T	
							S	02	
							SIGT	DT	
							DD		
				0	19.30	33.71		23.981	393.8
				10	18.69	33.69		24.119	380.6
				20	18.30	33.67		24.201	372.8
				30	18.06	33.67		24.260	367.1
				50	15.82	33.61		24.740	321.4
				75	13.52	33.75		25.340	264.3
				100	12.86	33.92		25.604	239.2

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Z	LATITUDE 28 25.5N			LONGITUDE 114 28.0W			MO/DAY/YR 08/30/65			MESSENGER 1804		TIME GMT		BOTTOM 93M		WIND 340		SPEED 03KT		WEATHER 1		DOMINANT WAVES 320 01	
	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD								
0	20.04	33.724	5.57	.21	.00	.0	411.0	0	20.04	33.724	5.57	23.800	411.0	0									
5	19.92	33.709	5.59	.20	.00	.0	409.1	10	19.83	33.708	5.62	23.842	407.0	.041									
10	19.83	33.708	5.62	.23	.00	.0	407.0	20	17.22	33.677	5.48	24.468	347.3	.079									
20	17.22	33.677	5.48	.46	.49	.6	347.3	30	16.63	33.699	5.08	24.623	332.5	.113									
30	16.63	33.699	5.08	.59	1.03	1.6	332.5	40	13.92	33.453	5.93	25.029	293.9	.176									
40	14.76	33.518	5.86	.48	.26	.3	306.0	75	13.04	33.551	3.51	25.282	269.9	.246									
50	13.92	33.453	5.93	.53	.17	1.8	293.9																
60	13.58	33.556	5.37	.75	.28	4.0	279.7																
80	12.88	33.574	2.87	1.74	.02	13.9	265.0																
90	12.62	33.830	2.22	2.03	.17	17.7	241.3																

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LATITUDE 28 25.5N			LONGITUDE 114 13.5W			MO/DAY/YR 08/30/65		MESSENGER 1612		TIME GMT		BOTTOM 45M		WIND 300		SPEED 04KT		WEATHER 1		DOMINANT WAVES 340 01	
Z	T	S	02	04	10	03	02	03	DT	Z	T	S	02	SIGT	DT	DD					
										0	20.65	33.79		23.689	421.6	0					
										10	19.50	33.71		23.929	398.7	.041					
										20	16.01	33.58		24.674	327.7	.077					
										30	15.04	33.63		24.928	303.5	.109					
										50A	14.16	33.62		25.108	286.4	.168					

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LATITUDE 28 17.0N			LONGITUDE 114 13.0W			MO/DAY/YR 08/30/65			MESSENGER TIME 1455 GMT		BOTTOM 21M	WIND 330	SPEED 04KT	WEATHER 1	DOMINANT WAVES 270 01		
Z	T	S	02	04	103	02	03	DT	Z	T	S		02	15T	DT	DD	
									0	21.05	33.82			23.604	429.7	0	
									10	20.70	33.82			23.698	420.7	.043	
									20	16.40	33.70			24.677	327.4	.080	

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LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
28	17.5N	114	28.0W	08	30/65	1323		GMT	82M	340	08KT	1	320	01	
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD
									0	20.11	33.76		23.809	410.2	0
									10	19.69	33.70		23.873	404.1	.041
									20	17.72	33.76		24.412	352.7	.079
									30	17.27	33.73		24.497	344.6	.114
									50	13.96	33.54		25.088	288.3	.177
									75	13.02	33.78		25.464	252.5	.245

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LATITUDE 28 17.5N			LONGITUDE 114 43.5W			MO/DAY/YR 08/30/65		MESSENGER TIME 1100 GMT		BOTTOM 97M	WIND 330	SPEED 09KT	WEATHER 4	DOMINANT WAVES 320 01		
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD	
									0	18.89	33.70		24.077	384.6	0	
									10	18.42	33.69		24.187	374.1	.038	
									20	17.75	33.65		24.320	361.4	.075	
									30	17.04	33.64		24.482	346.0	.110	
									50	15.22	33.58		24.850	310.9	.176	
									75	12.82	33.67		25.419	256.8	.248	
									100	12.20	33.94		25.748	225.5	.308	

A) THE S/T/D ANALOG RECORDING INDICATED A DEPTH OF MORE THAN 51 METERS.

RV ARGO 6508 STUDENT TRAINING CRUISE 28 A

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
28 18.0N		114 43.0W		09/03/65		1107		97M	080	06KT	1	320 01			
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD
									0	20.62	33.79		23.697	420.9	0
									10	20.55	33.77		23.700	420.5	.042
									20	20.06	33.76		23.822	408.9	.084
									30	19.15	33.69		24.003	391.6	.124
									50	17.55	33.60		24.330	360.5	.199
									75	14.38	33.59		25.039	293.0	.281

RV ARGO 6508 STUDENT TRAINING CRUISE 28 B

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
28 18.0N		114 43.0W		09/03/65		1207		97M							
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD
									0	20.63	33.77		23.679	422.6	0
									10	20.33	33.74		23.736	417.2	.042
									20	19.89	33.72		23.836	407.6	.083
									30	19.01	33.67		24.024	389.7	.123
									50	17.93	33.59		24.231	369.9	.199
									75	14.45	33.56		25.001	296.6	.283

RV ARGO 6508 STUDENT TRAINING CRUISE 28 C

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
28 18.0N		114 43.0W		09/03/65		1311		97M							
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD
									0	20.70	33.79		23.675	422.9	0
									10	20.71	33.79		23.673	423.2	.042
									20	20.27	33.77		23.774	413.5	.084
									30	19.81	33.73		23.864	404.9	.125
									50	18.32	33.66		24.189	374.0	.203
									75	14.62	33.63		25.018	294.9	.287

RV ARGO 6508 STUDENT TRAINING CRUISE 28 D

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
28 18.0N		114 43.0W		09/03/65		1417		97M							
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD
									0	20.65	33.79		23.689	421.6	0
									10	20.28	33.76		23.764	414.4	.042
									20	19.05	33.68		24.021	389.9	.082
									30	18.81	33.68		24.082	384.1	.121
									50	17.68	33.60		24.299	363.4	.196
									75	14.07	33.60		25.111	286.1	.278

RV ARGO 6508 STUDENT TRAINING CRUISE 28 E

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
28 18.0N		114 43.0W		09/03/65		1507		97M	130	13KT	5	320 02 06			
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD
									0	20.66	33.78		23.678	422.6	0
									10	20.22	33.76		23.780	412.9	.042
									20	19.18	33.67		23.981	393.8	.082
									30	18.83	33.68		24.077	384.6	.121
									50	17.49	33.60		24.345	359.1	.196
									75	14.02	33.59		25.114	285.8	.277

RV ARGO 6508 STUDENT TRAINING CRUISE 28 F

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
28 18.0N		114 43.0W		09/03/65		1608		97M							
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD
									0	20.65	33.78		23.681	422.4	0
									10	20.20	33.76		23.785	412.4	.042
									20	19.25	33.69		23.978	394.0	.082
									30	18.83	33.68		24.077	384.6	.121
									50	17.75	33.60		24.282	365.1	.196
									75	13.89	33.61		25.157	281.8	.278

RV ARGO 6508 STUDENT TRAINING CRUISE 28 G

LATITUDE		LONGITUDE		MO/DAY/YR	MESSENGER	TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES				
28 18.0N		114 43.0W		09/03/65	1702	GMT	97M								
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD
									0	20.72	33.78		23.662	424.1	0
									10	20.21	33.75		23.775	413.4	.042
									20	19.58	33.70		23.901	401.4	.083
									30	18.87	33.66		24.051	387.0	.122
									50	17.80	33.57		24.247	368.4	.198
									75	13.99	33.59		25.120	285.2	.280

RV ARGO 6508 STUDENT TRAINING CRUISE 28 H

LATITUDE		LONGITUDE		MO/DAY/YR	MESSENGER	TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES				
28 18.0N		114 43.0W		09/03/65	1804	GMT	97M								
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD
									0	20.70	33.78		23.668	423.6	0
									10	20.16	33.75		23.788	412.2	.042
									20	19.46	33.70		23.932	398.4	.082
									30	18.80	33.65		24.061	386.1	.122
									50	17.65	33.61		24.314	362.0	.197
									75	14.07	33.60		25.111	286.1	.278

RV ARGO 6508 STUDENT TRAINING CRUISE 28 I

LATITUDE		LONGITUDE		MO/DAY/YR	MESSENGER	TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES				
28 18.0N		114 43.0W		09/03/65	1904	GMT	97M	110	02KT	5		320 01			
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD
									0	20.72	33.77		23.655	424.9	0
									10	20.22	33.75		23.772	413.7	.042
									20	19.65	33.71		23.891	402.4	.083
									30	18.99	33.65		24.014	390.7	.123
									50	17.83	33.61		24.270	366.2	.198
									75	14.36	33.57		25.028	294.1	.281

RV ARGO 6508 STUDENT TRAINING CRUISE 28 J

LATITUDE		LONGITUDE		MO/DAY/YR	MESSENGER	TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES				
28 18.0N		114 43.0W		09/03/65	2004	GMT	97M								
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD
									0	20.92	33.77		23.601	430.0	0
									10	20.27	33.75		23.759	414.9	.042
									20	19.73	33.73		23.885	402.9	.083
									30	19.19	33.68		23.986	393.3	.123
									50	17.90	33.61		24.253	367.8	.199
									75	14.37	33.59		25.041	292.8	.282

RV ARGO 6508 STUDENT TRAINING CRUISE 28 K

LATITUDE		LONGITUDE		MO/DAY/YR	MESSENGER	TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES				
28 18.0N		114 43.0W		09/03/65	2103	GMT	97M								
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD
									0	20.82	33.77		23.628	427.4	0
									10	20.57	33.76		23.687	421.8	.042
									20	20.02	33.72		23.802	410.8	.084
									30	19.37	33.71		23.963	395.5	.125
									50	17.70	33.51		24.225	370.5	.201
									75	14.37	33.60		25.048	292.1	.285

RV ARGO

6508 STUDENT TRAINING CRUISE

28 L

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
28 18.0N		114 43.0W		09/03/65		2247		GMT	97M						
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD
0	21.07	33.767	5.39	.27		.00	.6	434.1	0	21.07	33.767	5.39	23.558	434.1	0
5	20.84	33.761	5.31	.26		.01	.0	428.6	10	20.67	33.758	5.36	23.659	424.5	.043
10	20.67	33.758	5.36	.24		.00	.0	424.5	20	20.00	33.733	5.39	23.817	409.4	.085
15	20.16	33.729	5.39	.25		.01	.0	413.7	30	19.22	33.691	5.43	23.986	393.3	.125
24	19.56	33.735	5.39	.31		.00	.0	398.3	50	17.04	33.548	5.69	24.410	352.8	.200
34	19.02	33.648	5.47	.33		.00	.0	391.5	75	14.17	33.587	5.52	25.081	289.0	.280
46	17.42	33.566	5.65	.36		.00	.0	360.0							
61	15.10	33.495	5.84	.40		.12	1.5	314.7							
75	14.17	33.587	5.52	.58		.10	10.1	289.0							
84	12.99	33.664	4.31	1.09		.09	13.0	260.5							
88	12.94	33.717	3.79	1.31		.07	16.9	255.6							
92	12.88	33.806	2.87	1.86		.12	17.2	247.9							
95	12.75	33.811	2.82	1.75				245.1							

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6508 STUDENT TRAINING CRUISE

28 M

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
28 18.0N		114 43.0W		09/04/65		0238		GMT	97M						
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.94	33.76		23.588	431.2	0
									10	20.57	33.77		23.695	421.1	.043
									20	20.51	33.74		23.688	421.7	.085
									30	19.63	33.71		23.896	401.9	.126
									50	17.80	33.50		24.194	373.5	.204
									75	14.52	33.60		25.017	295.1	.288

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6508 STUDENT TRAINING CRUISE

28 N

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
28 17.5N		114 43.0W		09/04/65		0304		GMT	97M	210	DBKT	1	320 02		
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.92	33.76		23.594	430.7	0
									10	20.58	33.76		23.685	422.0	.043
									20	20.43	33.74		23.709	419.7	.085
									30	19.63	33.71		23.896	401.9	.126
									50	17.87	33.57		24.230	370.0	.203
									75	14.46	33.58		25.014	295.3	.287

RV ARGO

6508 STUDENT TRAINING CRUISE

28 O

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
28 17.5N		114 43.0W		09/04/65		0401		GMT	97M						
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.94	33.77		23.596	430.5	0
									10	20.57	33.77		23.695	421.1	.043
									20	20.54	33.77		23.703	420.3	.085
									30	19.75	33.72		23.872	404.1	.126
									50	17.60	33.57		24.295	363.8	.203
									75	14.50	33.59		25.013	295.4	.286

RV ARGO

6508 STUDENT TRAINING CRUISE

28 P

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
28 17.5N		114 43.0W		09/04/65		0501		GMT	97M						
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.90	33.78		23.614	428.8	0
									10	20.62	33.78		23.689	421.6	.043
									20	20.58	33.80		23.715	419.1	.085
									30	20.08	33.70		23.771	413.8	.126
									50	17.25	33.53		24.348	358.7	.204
									75	14.71	33.55		24.938	302.6	.287

RV ARGO 6508 STUDENT TRAINING CRUISE 29

LATITUDE 28 17.5N			LONGITUDE 114 58.5W			MO/DAY/YR 08/30/65		MESSENGER TIME 0939		TIME GMT		BOTTOM 112M	WIND 340	SPEED 09KT	WEATHER 0	DOMINANT WAVES 360 01		
Z	T	S	02	PO4	SI03	NO2	NO3	DT	Z	T	S	02	SIGT	DT	DD			
									0	20.82	33.78		23.636	426.7	0			
									10	20.80	33.79		23.649	425.5	.043			
									20	20.30	33.75		23.751	415.7	.085			
									30	19.37	33.71		23.963	395.5	.125			
									50	17.35	33.69		24.447	349.3	.200			
									75	13.45	33.61		25.247	273.2	.278			
									100	12.34	33.82		25.628	236.9	.343			

RV ARGO 6508 STUDENT TRAINING CRUISE 30 B

LATITUDE 28 17.5N			LONGITUDE 115 06.5W			MO/DAY/YR 08/30/65		MESSENGER TIME 0820		TIME GMT		BOTTOM 108M	WIND 340	SPEED 08KT	WEATHER 0	DOMINANT WAVES 360 01		
Z	T	S	02	PO4	SI03	NO2	NO3	DT	Z	T	S	02	SIGT	DT	DD			
									0	20.30								
									10	20.31								
									20	19.12								
									30	18.02								
									50	15.56								
									75	14.43								
									100	12.91								

RV ARGO 6508 STUDENT TRAINING CRUISE 30 C

LATITUDE 28 17.5N			LONGITUDE 115 06.5W			MO/DAY/YR 08/30/65		MESSENGER TIME 0846		TIME GMT		BOTTOM 108M	WIND 340	SPEED 08KT	WEATHER 0	DOMINANT WAVES 360 01		
Z	T	S	02	PO4	SI03	NO2	NO3	DT	Z	T	S	02	SIGT	DT	DD			
									0	21.02	33.82		23.612	428.9	0			
									10	20.21	33.77		23.790	412.0	.042			
									20	19.77	33.68		23.837	407.5	.083			
									30	18.03	33.70		24.290	364.3	.122			
									50	15.62	33.55		24.739	321.5	.191			
									75	14.10	33.78		25.244	273.5	.265			
									100	12.88	33.90		25.585	241.0	.330			

RV ARGO 6508 STUDENT TRAINING CRUISE 31

LATITUDE 28 10.0N			LONGITUDE 115 06.5W			MO/DAY/YR 08/30/65		MESSENGER TIME 0710		TIME GMT		BOTTOM 86M	WIND 340	SPEED 08KT	WEATHER 0	DOMINANT WAVES 360 01		
Z	T	S	02	PO4	SI03	NO2	NO3	DT	Z	T	S	02	SIGT	DT	DD			
									0	20.98	33.77		23.585	431.5	0			
									10	20.10	33.69		23.758	415.0	.042			
									20	18.93	33.69		24.059	386.3	.082			
									30	18.32	33.73		24.242	368.9	.120			
									50	16.50	33.71		24.662	328.9	.190			
									75	14.05	33.74		25.224	275.4	.266			

RV ARGO 6508 STUDENT TRAINING CRUISE 32

LATITUDE 28 10.5N			LONGITUDE 114 58.0W			MO/DAY/YR 08/30/65		MESSENGER TIME 0429		TIME GMT		BOTTOM 99M	WIND 340	SPEED 12KT	WEATHER 1	DOMINANT WAVES 320 02		
Z	T	S	02	PO4	SI03	NO2	NO3	DT	Z	T	S	02	SIGT	DT	DD			
									0	20.80	33.81		23.664	424.0	0			
									10	20.79	33.80		23.659	424.5	.042			
									20	20.46	33.78		23.732	417.5	.085			
									30	20.27	33.76		23.767	414.2	.126			
									50	18.87	33.70		24.082	384.1	.206			
									75	14.72	33.74		25.082	288.9	.291			

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6508 STUDENT TRAINING CRUISE

32

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER		DOMINANT WAVES	
28 10.5N		114 58.0W		08/30/65		0502		GMT	99M	340	12KT	1		320 02	
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD
0	20.82	33.783	5.23	.18		.00	.0	426.5	0	20.82	33.783	5.23	23.638	426.5	0
5	20.82	33.775	5.25	.18		.00	.0	427.1	10	20.84	33.778	5.24	23.629	427.4	.043
10	20.84	33.778	5.24	.20		.00	.0	427.4	20	20.58	33.770	5.26	23.692	421.3	.085
20	20.58	33.770	5.26	.21		.00	.0	421.3	30	20.35	33.747	5.26	23.736	417.2	.127
30	20.35	33.747	5.26	.24		.00	.0	417.2	50	19.10	33.741	5.18	24.055	386.7	.208
40	20.18	33.741	5.30	.27		.00	.0	413.3	75	14.95	33.722	4.11	25.018	294.9	.294
50	19.10	33.741	5.18	.34		.02	.0	386.7							
60	17.14	33.707	5.07	.55		.65	.4	343.4							
80	14.42	33.734	3.57	1.33		.67	10.3	283.2							

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6508 STUDENT TRAINING CRUISE

33

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER		DOMINANT WAVES	
28 10.5N		114 43.0W		08/30/65		0257		GMT	86M	340	12KT	1		300 02	
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD
									0	20.91	33.81		23.634	426.8	0
									10	20.93	33.81		23.629	427.4	.043
									20	20.35	33.80		23.776	413.3	.085
									30	20.07	33.79		23.842	407.0	.126
									50	18.65	33.77		24.190	373.8	.204
									75	17.48	33.77		24.477	346.5	.295

RV ARGO

6508 STUDENT TRAINING CRUISE

34

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER		DOMINANT WAVES	
28 10.0N		114 28.5W		08/30/65		0002		GMT	80M	330	10KT	1		320 02	
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD
0	19.44	33.676	5.46	.32		.01	.0	399.7	0	19.44	33.676	5.46	23.919	399.7	0
5	19.43	33.676	5.65	.33		.01	.0	399.4	10	19.28	33.682	5.67	23.964	395.4	.040
14	19.16	33.686	5.68	.32		.01	.0	392.1	20	18.43	33.716	5.50	24.204	372.5	.078
24	17.93	33.737	5.36	.39		.07	.0	359.2	30	17.66	33.741	5.25	24.411	352.8	.115
34	17.57	33.735	5.20	.46		1.21	.0	351.1	50	15.96	33.641	5.07	24.732	322.2	.182
43	17.28	33.723	5.06	.58		1.05	.3	345.4							
53	15.32	33.611	5.08	.66		1.05	1.3	310.8							
68	13.77	33.645	4.33	1.12		.32	8.6	276.8							
71	13.64	33.645	3.86	1.32		.22	10.5	271.1							

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6508 STUDENT TRAINING CRUISE

34

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER		DOMINANT WAVES	
28 10.0N		114 28.5W		08/30/65		0055		GMT	80M	330	10KT	1		320 02	
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD
									0	19.76	33.70		23.855	405.8	0
									10	19.30	33.71		23.981	393.8	.040
									20	17.95	33.76		24.356	358.0	.078
									30	17.65	33.76		24.428	351.1	.113
									50	15.20	33.52		24.808	314.9	.180
									75	13.32	33.72		25.358	262.6	.253

RV ARGO

6508 STUDENT TRAINING CRUISE

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LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER		DOMINANT WAVES	
28 10.5N		114 14.5W		08/29/65		1357		GMT	19M			2		360 01	
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD
									0	21.19	33.94		23.657	424.7	0
									10	21.20	33.94		23.654	424.9	.042

RV ARGO

6508 STUDENT TRAINING CRUISE

35 A

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER		DOMINANT WAVES	
28 10.0N		114 13.5W		08/29/65		2225		GMT	26M	320	09KT	1		360 01	
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD
									0	21.55	33.87		23.506	439.1	0
									10	20.99	33.88		23.666	423.8	.043
									20	16.30	33.66		24.669	328.1	.081

RV ARGO 6508 STUDENT TRAINING CRUISE 36

LATITUDE		LONGITUDE		MO/DAY/YR	MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
27	55.5N	114	28.5W	08/29/65	0932	GMT		32M	360	10KT	0	360	01		
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD
									0	20.91	33.81		23.634	426.8	0
									10	20.53	33.79		23.721	418.6	.042
									20	17.25	33.55		24.364	357.3	.081

RV ARGO 6508 STUDENT TRAINING CRUISE 36

LATITUDE		LONGITUDE		MO/DAY/YR	MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
27	55.5N	114	28.5W	08/29/65	1004	GMT		32M	360	10KT	0	360	01		
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD
0	21.02	33.790	5.34	.21		.0	431.1	0	21.02	33.790	5.34	23.589	431.1	0	
5	21.04	33.790	5.44	.15		.0	431.6	10	21.04	33.790	5.38	23.584	431.6	.043	
10	21.04	33.790	5.38	.21		.1	431.6	20	19.16	33.691	5.65	24.002	391.8	.084	
15	20.22	33.753	5.76	.15		.0	413.4								
20	19.16	33.691	5.65	.24		.0	391.8								
25	16.29	33.667	5.26	.66		1.3	327.4								

RV ARGO 6508 STUDENT TRAINING CRUISE 37

LATITUDE		LONGITUDE		MO/DAY/YR	MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
27	57.0N	114	43.0W	08/29/65	0802	GMT		75M	200	04KT	0	160	01		
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD
									0	20.62	33.80		23.704	420.2	0
									10	20.62	33.78		23.689	421.6	.042
									20	20.21	33.76		23.783	412.7	.084
									30	19.11	33.70		24.021	389.9	.124
									50	15.99	33.51		24.625	332.4	.197

RV ARGO 6508 STUDENT TRAINING CRUISE 38

LATITUDE		LONGITUDE		MO/DAY/YR	MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
27	56.0N	114	59.0W	08/29/65	0539	GMT		63M	190	07KT	0	160	01		
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD
0	20.32	33.713	5.01	.32		.01	418.9	0	20.32	33.713	5.01	23.718	418.9	0	
5	20.16	33.704	5.26	.22		.01	415.5	10	19.45	33.686	5.35	23.924	399.2	.041	
10	19.46	33.686	5.35	.23		.02	399.2	20	18.55	33.629	5.37	24.108	381.7	.080	
20	18.55	33.629	5.37	.30		.02	381.7	30	17.64	33.588	5.67	24.299	363.4	.117	
30	17.64	33.588	5.67	.34		.02	363.4								
40	16.76	33.554	5.86	.38		.02	346.0								

RV ARGO 6508 STUDENT TRAINING CRUISE 38

LATITUDE		LONGITUDE		MO/DAY/YR	MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
27	56.0N	114	59.0W	08/29/65	0605	GMT		63M	190	07KT	0	160	01		
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD
									0	20.28	33.71		23.726	418.1	0
									10	19.39	33.68		23.935	398.2	.041
									20	18.46	33.63		24.131	379.5	.080
									30	17.49	33.54		24.299	363.5	.117
									50	15.62	33.57		24.754	320.1	.186

RV ARGO 6508 STUDENT TRAINING CRUISE 39

LATITUDE		LONGITUDE		MO/DAY/YR	MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
27	56.0N	115	07.0W	08/29/65	0432	GMT		41M	300	02KT	0	01			
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD
									0	20.75	33.89		23.738	416.9	0
									10	19.01	33.86		24.168	375.9	.040
									20	16.93	33.83		24.653	329.7	.075
									30	16.51	33.82		24.744	321.1	.108

RV ARGO 6508 STUDENT TRAINING CRUISE 40

LATITUDE 28 04.0N			LONGITUDE 115 07.0W			MO/DAY/YR 08/29/65		MESSENGER TIME 0258		BOTTOM 75M	WIND 130	SPEED 03KT	WEATHER 0	DOMINANT WAVES 01		
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD	
									0	20.15	33.70		23.753	415.5	0	
									10	19.06	33.68		24.019	390.2	.040	
									20	18.45	33.63		24.134	379.2	.079	
									30	17.72	33.58		24.274	365.8	.116	
									50	16.21	33.74		24.751	320.3	.185	

RV ARGO 6508 STUDENT TRAINING CRUISE 41

LATITUDE 28 04.0N			LONGITUDE 114 58.5W			MO/DAY/YR 08/29/65		MESSENGER TIME 0155		BOTTOM 75M	WIND 080	SPEED 09KT	WEATHER 0	DOMINANT WAVES 320 02		
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD	
									0	21.16	33.79		23.552	434.7	0	
									10	20.12	33.75		23.799	411.2	.042	
									20	19.81	33.73		23.864	404.9	.083	
									30	18.88	33.69		24.072	385.1	.123	
									50	16.85	33.71		24.580	336.6	.195	

RV ARGO 6508 STUDENT TRAINING CRUISE 42

LATITUDE 28 04.0N			LONGITUDE 114 43.5W			MO/DAY/YR 08/29/65		MESSENGER TIME 0005		BOTTOM 65M	WIND 340	SPEED 10KT	WEATHER 0	DOMINANT WAVES 330 01 04		
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD	
									0	20.96	33.82		23.628	427.4	0	
									10	20.71	33.80		23.680	422.4	.043	
									20	20.05	33.77		23.832	408.0	.084	
									30	19.60	33.73		23.919	399.7	.125	
									50	16.38	33.72		24.697	325.5	.197	

RV ARGO 6508 STUDENT TRAINING CRUISE 43 A

LATITUDE 28 04.0N			LONGITUDE 114 27.0W			MO/DAY/YR 08/28/65		MESSENGER TIME 2130		BOTTOM 54M	WIND 310	SPEED 11KT	WEATHER 0	DOMINANT WAVES 330 01 04		
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD	
									0	19.74	33.72		23.875	403.9	0	
									10	19.21	33.70		23.996	392.3	.040	
									20	17.10	33.57		24.414	352.4	.077	
									30	15.70	33.50		24.682	326.9	.111	

RV ARGO 6508 STUDENT TRAINING CRUISE 43 B

LATITUDE 28 04.0N			LONGITUDE 114 27.0W			MO/DAY/YR 08/28/65		MESSENGER TIME 2157		BOTTOM 54M	WIND 310	SPEED 11KT	WEATHER 0	DOMINANT WAVES 330 01 04		
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD	
									0	20.35	33.75		23.738	416.9	0	
									10	19.10	33.70		24.024	389.7	.040	
									20	17.19	33.58		24.401	353.7	.078	
									30	16.10	33.67		24.723	323.1	.111	
									50	14.65	33.55		24.950	301.4	.174	

RV ARGO 6508 STUDENT TRAINING CRUISE 43 C

LATITUDE 28 04.0N			LONGITUDE 114 28.0W			MO/DAY/YR 08/29/65		MESSENGER TIME 1150		BOTTOM 73M	WIND 340	SPEED 06KT	WEATHER 0	DOMINANT WAVES 360 01		
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD	
									0	20.22	33.76		23.780	412.9	0	
									10	20.24	33.76		23.775	413.4	.041	
									20	19.92	33.73		23.836	407.6	.082	
									30	18.74	33.69		24.107	381.7	.122	
									50	15.29	33.50		24.773	318.3	.192	

RV ARGO										6508 STUDENT TRAINING CRUISE					50	
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
28 03.5N		115 10.5W		09/05/65		1500		GMT		47M	220	05KT	6	180 01		
Z	T	S	02	P04	S103	N02	N03	DT		Z	T	S	02	SIGT	DT	DD
										0	19.52	33.80		23.993	392.6	0
										10	18.49	33.72		24.192	373.6	.038
										20	17.86	33.72		24.347	358.9	.075
										30	17.76	33.72		24.371	356.5	.111
										50A	15.93	33.72		24.800	315.7	.178

RV ARGO										6508 STUDENT TRAINING CRUISE					51	
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
28 01.5N		115 09.0W		09/05/65		1522		GMT		54M						
Z	T	S	02	P04	S103	N02	N03	DT		Z	T	S	02	SIGT	DT	DD
										0	22.51	34.30		23.564	433.6	0
										10	19.20	33.78		24.059	386.3	.041
										20	16.73	33.64		24.555	339.1	.077
										30	16.24	33.68		24.698	325.4	.111
										50	15.93	33.74		24.815	314.3	.175

RV ARGO										6508 STUDENT TRAINING CRUISE					52	
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
27 59.5N		115 08.0W		09/05/65		1544		GMT		45M						
Z	T	S	02	P04	S103	N02	N03	DT		Z	T	S	02	SIGT	DT	DD
										0	22.39	34.28		23.583	431.8	0
										10	22.35	34.28		23.594	430.7	.043
										20	21.63	34.22		23.749	415.9	.086
										30	20.50	34.06		23.934	398.3	.126

RV ARGO										6508 STUDENT TRAINING CRUISE					53	
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
27 57.5N		115 07.0W		09/05/65		1604		GMT		41M						
Z	T	S	02	P04	S103	N02	N03	DT		Z	T	S	02	SIGT	DT	DD
										0	22.52	34.28		23.546	435.3	0
										10	22.39	34.28		23.583	431.8	.043
										20	22.32	34.28		23.602	429.9	.087
										30	22.05	34.28		23.678	422.7	.129

RV ARGO										6508 STUDENT TRAINING CRUISE					54	
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
27 55.5N		115 05.5W		09/05/65		1626		GMT		37M						
Z	T	S	02	P04	S103	N02	N03	DT		Z	T	S	02	SIGT	DT	DD
										0	22.63	34.30		23.530	436.8	0
										10	22.60	34.30		23.538	436.0	.044
										20	22.56	34.31		23.557	434.2	.087
										30	22.30	34.30		23.623	427.9	.130

RV ARGO										6508 STUDENT TRAINING CRUISE					55	
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
27 53.5N		115 04.5W		09/05/65		1651		GMT		19M						
Z	T	S	02	P04	S103	N02	N03	DT		Z	T	S	02	SIGT	DT	DD
										0	22.93	34.30		23.444	445.0	0
										10	22.33	34.29		23.607	429.4	.044

A) THE S/T/D ANALOG RECORDING INDICATED A DEPTH OF MORE THAN 54 METERS.

RV ARGO 6508 STUDENT TRAINING CRUISE 56

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER	TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES				
27 53.0N	115 04.0W	09/05/65	1705	GMT	19M								
Z	T	S	02	P04 S103	N02 N03	DT	Z	T	S	02	SIGT	DT	DD
							0	22.85	34.30		23.467	442.8	0
							10	22.47	34.15		23.462	443.3	.044

RV ARGO 6508 STUDENT TRAINING CRUISE 57

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER	TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES				
27 46.0N	115 10.0W	09/05/65	1758	GMT	93M								
Z	T	S	02	P04 S103	N02 N03	DT	Z	T	S	02	SIGT	DT	DD
							0	23.00	34.22		23.364	452.7	0
							10	23.01	34.23		23.368	452.2	.045
							20	22.00	34.13		23.578	432.2	.090
							30	18.81	33.76		24.143	378.3	.130
							50	17.34	33.88		24.595	335.3	.202
							75	15.89	33.97		25.000	296.6	.281

RV ARGO 6508 STUDENT TRAINING CRUISE 58

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER	TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES				
27 47.5N	115 11.0W	09/05/65	1818	GMT	86M								
Z	T	S	02	P04 S103	N02 N03	DT	Z	T	S	02	SIGT	DT	DD
							0	22.98	34.22		23.369	452.1	0
							10	22.94	34.22		23.381	451.0	.045
							20	22.61	34.18		23.445	444.9	.090
							30	19.78	33.91		24.009	391.1	.132
							50	18.40	34.00		24.428	351.1	.206
							75	16.25	33.94		24.895	306.6	.289

RV ARGO 6508 STUDENT TRAINING CRUISE 59

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER	TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES				
27 49.0N	115 12.0W	09/05/65	1842	GMT	75M								
Z	T	S	02	P04 S103	N02 N03	DT	Z	T	S	02	SIGT	DT	DD
							0	23.13	34.22		23.326	456.2	0
							10	22.99	34.22		23.367	452.4	.045
							20	22.79	34.21		23.416	447.6	.091
							30	21.29	34.14		23.782	412.8	.134
							50	19.17	34.15		24.349	358.7	.211
							75	15.87	34.00		25.028	294.0	.293

RV ARGO 6508 STUDENT TRAINING CRUISE 60

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER	TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES				
27 52.0N	115 13.5W	09/05/65	1907	GMT	60M	240	06KT	2	230 02				
Z	T	S	02	P04 S103	N02 N03	DT	Z	T	S	02	SIGT	DT	DD
							0	23.15	34.26		23.351	453.9	0
							10	23.03	34.27		23.393	449.9	.045
							20	23.00	34.28		23.409	448.3	.090
							30	22.00	34.23		23.654	424.9	.134
							50	18.96	34.16		24.410	352.9	.212

RV ARGO 6508 STUDENT TRAINING CRUISE 61

LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER	TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES				
27 54.0N	115 14.5W	09/05/65	1930	GMT	47M								
Z	T	S	02	P04 S103	N02 N03	DT	Z	T	S	02	SIGT	DT	DD
							0	23.24	34.28		23.340	454.9	0
							10	23.02	34.30		23.419	447.4	.045
							20	22.27	34.26		23.601	430.0	.089
							30	21.18	34.22		23.872	404.1	.131

RV ARGO 6508 STUDENT TRAINING CRUISE 62

LATITUDE		LONGITUDE		MO/DAY/YR	MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
Z	T	S					GMT		Z	T	S		SIGT	DT	DD
			02	P04	S103	N02	N03	DT				02			
									0	23.14	34.29		23.376	451.4	0
									10	23.02	34.29		23.411	448.2	.045
									20	22.00	34.25		23.669	423.5	.089
									30	19.25	34.20		24.366	357.0	.128

RV ARGO 6508 STUDENT TRAINING CRUISE 63

LATITUDE		LONGITUDE		MO/DAY/YR	MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
Z	T	S					GMT		Z	T	S		SIGT	DT	DD
			02	P04	S103	N02	N03	DT				02			
									0	23.12	34.28		23.375	451.6	0
									10	23.07	34.29		23.397	449.5	.045
									20	22.38	34.27		23.578	432.2	.089
									30	22.28	34.29		23.621	428.1	.132

RV ARGO 6508 STUDENT TRAINING CRUISE 64

LATITUDE		LONGITUDE		MO/DAY/YR	MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
Z	T	S					GMT		Z	T	S		SIGT	DT	DD
			02	P04	S103	N02	N03	DT				02			
									0	23.16	34.30		23.378	451.3	0
									10	23.02	34.30		23.419	447.4	.045
									20	22.41	34.27		23.569	433.0	.089
									30	20.58	34.10		23.943	397.4	.131
									50	19.48	34.10		24.231	369.9	.208

RV ARGO 6508 STUDENT TRAINING CRUISE 65

LATITUDE		LONGITUDE		MO/DAY/YR	MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
Z	T	S					GMT		Z	T	S		SIGT	DT	DD
			02	P04	S103	N02	N03	DT				02			
									0	23.19	34.30		23.370	452.1	0
									10	22.31	34.28		23.605	429.6	.044
									20	21.85	34.23		23.696	421.0	.087
									30	21.29	34.21		23.835	407.7	.128
									50	18.48	34.19		24.553	339.2	.203

RV ARGO 6508 STUDENT TRAINING CRUISE 66

LATITUDE		LONGITUDE		MO/DAY/YR	MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
Z	T	S					GMT		Z	T	S		SIGT	DT	DD
			02	P04	S103	N02	N03	DT				02			
									0	23.26	34.29		23.342	454.8	0
									10	22.13	34.30		23.671	423.3	.044
									20	21.96	34.30		23.718	418.8	.086
									30	21.67	34.31		23.806	410.4	.128
									50	18.60	34.18		24.516	342.8	.203

RV ARGO 6508 STUDENT TRAINING CRUISE 67

LATITUDE		LONGITUDE		MO/DAY/YR	MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
Z	T	S					GMT		Z	T	S		SIGT	DT	DD
			02	P04	S103	N02	N03	DT				02			
									0	22.82	34.30		23.476	442.0	0
									10	22.34	34.29		23.604	429.7	.044
									20	22.17	34.30		23.660	424.4	.086
									30	20.50	34.23		24.063	385.9	.127
									50	17.92	34.12		24.638	331.1	.199

RV ARGO										6508 STUDENT TRAINING CRUISE										68			
LATITUDE			LONGITUDE			MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES								
27 51.0N			115 00.5W			09/05/65		2332		GMT	15M	290	10KT	2	230 02								
Z	T	S	02	P04	S103	N02	N03	DT		Z	T	S	02	SIGT	DT	DD							
										0	22.24	34.11		23.496	440.0	0							
										10	21.73	34.08		23.615	428.6	.043							

RV ARGO										6508 STUDENT TRAINING CRUISE										69			
LATITUDE			LONGITUDE			MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES								
27 56.0N			115 00.0W			09/06/65		0007		GMT	56M												
Z	T	S	02	P04	S103	N02	N03	DT		Z	T	S	02	SIGT	DT	DD							
										0	22.76	34.30		23.493	440.3	0							
										10	22.63	34.31		23.537	436.1	.044							
										20	22.38	34.30		23.601	430.0	.087							
										30	22.17	34.30		23.660	424.4	.130							
										50	21.14	34.12		23.807	410.3	.214							

RV ARGO										6508 STUDENT TRAINING CRUISE										70			
LATITUDE			LONGITUDE			MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES								
28 01.0N			115 00.0W			09/06/65		0042		GMT	75M												
Z	T	S	02	P04	S103	N02	N03	DT		Z	T	S	02	SIGT	DT	DD							
										0	21.43	33.78		23.470	442.5	0							
										10	20.78	33.76		23.631	427.1	.043							
										20	19.93	33.72		23.826	408.6	.085							
										30	18.86	33.64		24.039	388.3	.125							
										50	18.32	33.71		24.227	370.3	.201							

RV ARGO										6508 STUDENT TRAINING CRUISE										71			
LATITUDE			LONGITUDE			MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES								
28 06.0N			115 00.0W			09/06/65		0116		GMT	82M	040	02KT	2									
Z	T	S	02	P04	S103	N02	N03	DT		Z	T	S	02	SIGT	DT	DD							
										0	21.38	33.78		23.484	441.2	0							
										10	21.30	33.79		23.513	438.4	.044							
										20	20.90	33.80		23.629	427.3	.087							
										30	19.98	33.70		23.797	411.3	.129							
										50	18.46	33.70		24.184	374.4	.208							
										75	13.78	33.78		25.310	267.1	.289							

RV ARGO										6508 STUDENT TRAINING CRUISE										72			
LATITUDE			LONGITUDE			MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES								
28 11.0N			115 00.0W			09/06/65		0153		GMT	101M	340	07KT	2									
Z	T	S	02	P04	S103	N02	N03	DT		Z	T	S	02	SIGT	DT	DD							
										0	21.40	33.79		23.486	441.0	0							
										10	21.12	33.80		23.570	433.0	.044							
										20	20.97	33.79		23.603	429.8	.087							
										30	20.09	33.74		23.799	411.1	.129							
										50	19.11	33.70		24.021	389.9	.209							
										75	16.90	33.91		24.722	323.2	.299							

RV ARGO										6508 STUDENT TRAINING CRUISE										73			
LATITUDE			LONGITUDE			MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES								
28 16.0N			115 00.0W			09/06/65		0226		GMT	108M	330	09KT	2									
Z	T	S	02	P04	S103	N02	N03	DT		Z	T	S	02	SIGT	DT	DD							
										0	21.57	33.90		23.523	437.5	0							
										10	21.53	33.91		23.542	435.7	.044							
										20	20.31	33.74		23.741	416.7	.086							
										30	19.97	33.74		23.830	408.1	.128							
										50	19.34	34.12		24.282	365.0	.205							
										75	15.82	33.74		24.840	311.9	.290							
										100	12.65	33.82		25.568	242.6	.360							

RV ARGO

6508 STUDENT TRAINING CRUISE

73 A

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
28 16.0N		115 00.0W		09/06/65		0231		GMT	108M	330	09KT	2			
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD
									0	21.52	33.91		23.544	435.4	0
									10	21.29	33.82		23.539	435.9	.044
									20	20.49	33.74		23.693	421.2	.086
									30	20.04	33.74		23.812	409.9	.128
									50	19.31	34.04		24.229	370.1	.206
									75	16.27	33.80		24.784	317.3	.293
									100	12.74	33.80		25.535	245.8	.364

RV ARGO

6508 STUDENT TRAINING CRUISE

74

LATITUDE			LONGITUDE			MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
28 21.0N			115 00.0W			09/06/65		0307		GMT	119M	300	10KT	Z	320 02		
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD		
									0	20.90	33.91A		23.713	419.3	0		
									10	20.71	33.88A		23.741	416.6	.042		
									20	20.52	33.82A		23.746	416.2	.084		
									30	19.72	33.88		24.002	391.8	.124		
									50	18.92	34.10		24.374	356.3	.199		
									75	16.05	33.60		24.680	327.1	.285		
									100	13.05	33.74		25.427	256.0	.358		

RV ARGO

6508 STUDENT TRAINING CRUISE

75

LATITUDE			LONGITUDE			MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
28 26.0N			115 00.0W			09/06/65		0337		GMT	125M	310	10KT				
Z	T	S	02	P04	S103	N02	N03	DT			Z	T	S	02	SIGT	DT	DD
											0	21.37	34.14		23.760	414.9	0
											10	21.35	34.13		23.758	415.1	.042
											20	20.28	34.06		23.992	392.7	.082
											30	20.23	34.07		24.013	390.7	.121
											50	19.54	34.07		24.193	373.5	.198
											75	16.32	33.88		24.833	312.5	.284
											100	13.57	33.61		25.222	275.5	.358

RV ARGO

6508 STUDENT TRAINING CRUISE

76

LATITUDE			LONGITUDE		MO/DAY/YR		MESS/NGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
28 31.5N			115 00.0W		09/06/65		0415		GMT	131M	260	07KT				
Z	T	S	02	P04	S103	N02	N03	DT		Z	T	S	02	SIGT	DT	DD
										0	21.29	34.10		23.751	415.7	0
										10	19.44	33.97		24.143	378.3	.040
										20	19.07	33.97		24.237	369.3	.077
										30	18.65	33.90		24.290	364.3	.114
										50	17.57	33.93		24.578	336.9	.184
										75	15.85	33.93		24.979	298.7	.264
										100	12.89	33.65		25.390	259.6	.335
										125	11.53	33.97		25.897	211.3	.394

RV ARGO

6508 STUDENT TRAINING CRUISE

77

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
28 36.5N		115 00.0W		09/06/65		0452		GMT	129M	280	06KT				
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD
									0	20.87	33.95		23.751	415.7	0
									10	20.65	34.10		23.924	399.2	.041
									20	18.24	33.92		24.407	353.2	.078
									30	17.27	34.00		24.703	324.9	.112
									50	16.47	33.96		24.860	310.0	.176
									75	15.13	33.94		25.146	282.7	.251
									100	12.67	33.66		25.441	254.8	.318
									125	11.19	34.00		25.983	203.2	.376

A) THE SALINITY RECORDING WAS ILLEGIBLE ABOVE 25 METERS. THE VALUE OF THE SURFACE SAMPLE, COLLECTED BY NANSEN BOTTLE, HAS BEEN TABULATED AND VALUES FOR 10 AND 20 METERS INTERPOLATED.

RV ARGO 6508 STUDENT TRAINING CRUISE 78

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES	
28 41.5N		115 00.0W		09/06/65		0527		116M		280		06KT					
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD		
									0	20.87	33.94		23.744	416.4	0		
									10	19.56	33.91		24.066	385.6	.040		
									20	19.16	33.92		24.176	375.2	.078		
									30	17.00	33.62		24.476	346.5	.114		
									50	14.47	33.60		25.027	294.1	.179		
									75	13.15	33.64		25.330	265.2	.249		
									100	11.71	33.81		25.740	226.3	.311		

RV ARGO 6508 STUDENT TRAINING CRUISE 79

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES	
28 46.5N		115 00.0W		09/06/65		0608		101M		240		06KT					
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD		
									0	19.60	33.66		23.865	404.8	0		
									10	18.55	33.68		24.147	377.9	.039		
									20	17.59	33.67		24.374	356.3	.076		
									30	16.49	33.60		24.580	336.7	.111		
									50	14.11	33.58		25.088	288.3	.173		
									75	12.57	33.72		25.506	248.5	.241		
									100	11.39	33.93		25.892	211.8	.299		

RV ARGO 6508 STUDENT TRAINING CRUISE 80

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES	
28 51.5N		115 00.0W		09/06/65		0645		99M		250		03KT					
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD		
									0	20.43	33.74		23.709	419.7	0		
									10	19.49	33.71		23.932	398.4	.041		
									20	17.48	33.57		24.324	361.0	.079		
									30	15.75	33.63		24.771	318.5	.113		
									50	13.58	33.58		25.197	277.9	.173		
									75	11.75	33.89		25.794	221.1	.236		

RV ARGO 6508 STUDENT TRAINING CRUISE 81

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES	
28 51.5N		115 05.5W		09/06/65		0719		119M		250		04KT		5		320 02	
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD		
									0	19.30	33.61		23.904	401.1	0		
									10	17.56	33.60		24.328	360.7	.038		
									20	17.33	33.59		24.375	356.2	.074		
									30	17.19	33.61		24.424	351.5	.109		
									50	14.60	33.57		24.977	298.9	.175		
									75	12.96	33.63		25.360	262.4	.245		
									100	12.09	33.92		25.754	225.0	.307		

RV ARGO 6508 STUDENT TRAINING CRUISE 82

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES	
28 51.5N		115 11.5W		09/06/65		0753		173M		280		03KT					
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD		
									0	19.57	33.62		23.843	406.9	0		
									10	19.65	33.65		23.845	406.7	.041		
									20	18.16	33.60		24.182	374.6	.080		
									30	17.85	33.62		24.273	365.9	.117		
									50	15.88	33.49		24.634	331.5	.187		
									75	14.47	33.59		25.020	294.8	.266		
									100	13.55	33.88		25.435	255.3	.335		
									125	12.74	33.90		25.612	238.4	.397		
									150	12.07	33.96		25.788	221.7	.456		

RV ARGO				6508 STUDENT TRAINING CRUISE										83			
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES				
28 46.5N		115 11.5W		09/06/65		0830		GMT	192M	290	04KT						
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD		
									0	20.66	33.90		23.770	413.9	0		
									10	20.63	33.90		23.778	413.2	.041		
									20	19.31	33.80		24.046	387.5	.081		
									30	17.90	33.70		24.322	361.2	.119		
									50	15.34	33.64		24.870	309.1	.186		
									75	15.10	33.99		25.191	278.4	.260		
									100	13.46	33.90		25.468	252.1	.327		
									125	12.68	33.96		25.655	234.4	.389		
									150	11.95	34.00		25.842	216.5	.446		

RV ARGO				6508 STUDENT TRAINING CRUISE												84	
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES	
28 41.5N		115 11.5W		09/06/65		0905		168M		290		04KT					
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD		
									0	21.35	33.91		23.591	431.0		0	
									10	21.33	33.90		23.589	431.2		.041	
									20	19.95	33.68		23.790	412.0		.085	
									30	18.92	33.76		24.115	381.0		.125	
									50	15.56	33.65		24.836	312.2		.195	
									75	13.89	33.79		25.295	268.6		.268	
									100	13.59	33.92		25.457	253.2		.333	
									125	12.59	33.91		25.650	234.9		.395	
									150	11.92	33.98		25.832	217.5		.453	

RV ARGO			6508 STUDENT TRAINING CRUISE													85	
LATITUDE 28 36.5N			LONGITUDE 115 11.5W			MO/DAY/YR 09/06/65		MESSENGER 0940		TIME GMT	BOTTOM 153M	WIND 270	SPEED 10KT	WEATHER	DOMINANT WAVES		
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD		
									0	21.40	33.93		23.592	430.8	0		
									10	21.18	33.88		23.614	428.7	.043		
									20	20.08	34.14		24.106	381.9	.084		
									30	18.00A	34.03		24.550	339.6	.120		
									50	16.98	34.01		24.779	317.7	.186		
									75	16.46	34.04		24.924	303.9	.264		
									100	14.27	33.82		25.239	273.9	.337		
									125	13.04	33.97		25.607	238.9	.402		

RV ARGO				6508 STUDENT TRAINING CRUISE												85 B
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
28 36.5N		115 11.5W		09/06/65		0947		GMT	153M	270	10KT					
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD	
									0	21.41	33.97		23.620	428.2	0	
									10	21.08	33.90		23.657	424.7	.043	
									20	20.18	34.18		24.110	381.5	.083	
									30	17.93	34.02		24.559	338.7	.119	
									50	16.98	34.03		24.795	316.2	.185	
									75	16.44	34.06		24.944	302.0	.263	
									100	14.14	33.85		25.289	269.1	.335	
									125	12.73	33.97		25.668	233.1	.398	
									150	11.68	34.07		25.947	206.6	.454	

RV ARGO			6508 STUDENT TRAINING CRUISE													86	
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES	
28 31.5N		115 11.5W		09/06/65		1028		145M		220		04KT					
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD		
									0	20.94	33.89		23.687	421.8	0		
									10	20.35	33.90		23.852	406.1	.041		
									20	19.56	34.19		24.279	365.3	.080		
									30	18.37	34.10		24.512	343.2	.116		
									50	18.32	34.14		24.555	339.1	.184		
									75	15.73	33.90		24.983	298.3	.264		
									100	14.25	33.73		25.174	280.1	.337		
									125	12.83	33.83		25.541	245.2	.404		

A) THE S/T/D TEMPERATURE RECORDING WAS OFF-SCALE BETWEEN 25 AND 40 METERS. THIS VALUE HAS BEEN DETERMINED BY COMPARING THIS RECORDING WITH THE RECORDING FROM 85B LOWERED 7 MINUTES LATER.

RV ARGO 6508 STUDENT TRAINING CRUISE 87

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES	
28 26.5N		115 11.5W		09/06/65		1105		GMT		142M		310		09KT		5		270 01	
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD				
									0	22.80	34.35		23.519	437.8	0				
									10	22.80	34.36		23.527	437.1	.044				
									20	20.21	34.14		24.071	385.1	.085				
									30	19.58	34.08		24.190	373.8	.123				
									50	18.78	34.10		24.409	352.9	.196				
									75	17.21	33.95		24.679	327.2	.281				
									100	14.95	33.86		25.124	284.8	.359				
									125	12.57	33.89		25.638	236.0	.424				

RV ARGO 6508 STUDENT TRAINING CRUISE 88

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES	
28 23.5N		115 11.5W		09/06/65		1136		GMT		101M		260		07KT		4			
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD				
									0	22.63	34.36		23.575	432.5	0				
									10	21.20	34.26		23.897	401.7	.042				
									20	20.62	34.23		24.031	389.0	.081				
									30	19.88	34.15		24.166	376.2	.120				
									50	18.77	34.00		24.336	359.9	.194				

RV ARGO 6508 STUDENT TRAINING CRUISE 89

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES	
28 27.0N		115 07.0W		09/06/65		1213		GMT		140M		300		08KT					
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD				
									0	22.18	34.28		23.642	426.1	0				
									10	20.47	34.10		23.972	394.6	.041				
									20	19.80	34.09		24.141	378.5	.080				
									30	19.57	34.12		24.223	370.7	.117				
									50	19.08	34.06		24.303	363.0	.191				
									75	16.87	34.04		24.828	313.0	.276				
									100	15.21	33.86		25.067	290.3	.352				
									125	12.98	33.68		25.395	259.1	.421				

RV ARGO 6508 STUDENT TRAINING CRUISE 90

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES	
28 31.0N		115 02.5W		09/06/65		1255		GMT		132M		310		07KT					
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD				
									0	21.30	34.04		23.703	420.3	0				
									10	20.92	34.18		23.912	400.3	.041				
									20	20.32	34.22		24.103	382.1	.080				
									30	19.43	34.12		24.259	367.2	.118				
									50	17.23	33.92		24.651	329.9	.188				
									75	16.78	34.05		24.857	310.3	.268				
									100	14.85	33.70		25.023	294.5	.344				
									125	11.97	33.80		25.683	231.7	.411				

RV ARGO 6508 STUDENT TRAINING CRUISE 91

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES	
28 35.0N		114 57.5W		09/06/65		1343		GMT		123M									
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	SIGT	DT	DD				
									0	20.92	33.93		23.723	418.4	0				
									10	20.92	33.98		23.761	414.8	.042				
									20	19.75	34.04		24.116	380.9	.082				
									30	19.09	34.04		24.285	364.7	.119				
									50	17.57	34.00		24.631	331.8	.189				
									75	14.91	33.80		25.087	288.4	.267				
									100	12.25	33.77		25.607	238.9	.333				

RV ARGO 6508 STUDENT TRAINING CRUISE 92

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		WIND SPEED		WEATHER		DOMINANT WAVES	
28 39.0N		114 53.5W		09/06/65		1425		116M							
Z	T	S	OZ	PO4	SI03	NO2	NO3	DT	Z	T	S	OZ	SIGT	DT	DD
									0	20.48	33.80		23.742	416.6	0
									10	19.68	33.70		23.875	403.8	.041
									20	17.98	33.61		24.234	369.6	.080
									30	16.05	33.51		24.611	333.7	.115
									50	14.96	33.59		24.914	304.8	.179
									75	12.41	33.68		25.506	248.5	.249
									100	11.81	33.92		25.806	220.0	.308

RV ARGO 6508 STUDENT TRAINING CRUISE 93

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		WIND SPEED		WEATHER		DOMINANT WAVES	
28 42.0N		114 49.5W		09/06/65		1503		103M		340 08KT		5		270 02	
Z	T	S	OZ	PO4	SI03	NO2	NO3	DT	Z	T	S	OZ	SIGT	DT	DD
									0	20.99	33.80		23.605	429.6	0
									10	20.92	33.80		23.624	427.8	.043
									20	17.12	33.64		24.463	347.8	.082
									30	15.39	33.66		24.874	308.6	.115
									50	13.14	33.62		25.317	266.5	.172
									75	12.02	33.77		25.651	234.8	.235
									100	11.28	33.98		25.951	206.2	.291

RV ARGO 6508 STUDENT TRAINING CRUISE 94

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		WIND SPEED		WEATHER		DOMINANT WAVES	
28 45.5N		114 45.0W		09/06/65		1538		91M							
Z	T	S	OZ	PO4	SI03	NO2	NO3	DT	Z	T	S	OZ	SIGT	DT	DD
									0	21.63	33.76		23.400	449.2	0
									10	19.95	33.70		23.805	410.5	.043
									20	17.32	33.70		24.462	347.9	.081
									30	15.00	33.62		24.929	303.4	.114
									50	13.05	33.64		25.350	263.4	.171
									75	12.27	33.88		25.688	231.2	.233

RV ARGO 6508 STUDENT TRAINING CRUISE 95

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		WIND SPEED		WEATHER		DOMINANT WAVES	
28 49.0N		114 41.0W		09/06/65		1610		84M							
Z	T	S	OZ	PO4	SI03	NO2	NO3	DT	Z	T	S	OZ	SIGT	DT	DD
									0	21.54	33.79		23.448	444.6	0
									10	20.82	33.78		23.636	426.7	.044
									20	18.45	33.72		24.202	372.7	.084
									30	15.23	33.62		24.879	308.2	.118
									50	13.24	33.59		25.274	270.6	.176
									75	12.63	33.81		25.564	243.0	.240

RV ARGO 6508 STUDENT TRAINING CRUISE 96

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		WIND SPEED		WEATHER		DOMINANT WAVES	
28 52.5N		114 37.0W		09/06/65		1642		76M							
Z	T	S	OZ	PO4	SI03	NO2	NO3	DT	Z	T	S	OZ	SIGT	DT	DD
									0	21.40	33.75		23.456	443.9	0
									10	20.64	33.74		23.653	425.0	.043
									20	18.44	33.71		24.197	373.2	.083
									30	16.22	33.63		24.665	328.6	.119
									50	14.06	33.56		25.083	288.8	.181
									75	13.21	33.75		25.403	258.3	.249

RV ARGO 6508 STUDENT TRAINING CRUISE 97

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		WIND SPEED		WEATHER		DOMINANT WAVES	
28 55.5N		114 34.0W		09/06/65		1715		52M							
Z	T	S	OZ	PO4	SI03	NO2	NO3	DT	Z	T	S	OZ	SIGT	DT	DD
									0	21.52	33.76		23.431	446.3	0
									10	19.96	33.75		23.840	407.2	.043
									20	18.07	33.58		24.189	373.9	.082
									30	16.79	33.64		24.541	340.4	.118
									50	15.82	33.62		24.748	320.7	.184

MUDDAUBER EXPEDITION

The MUDDAUBER Expedition, supported by the Marine Life Research Program of the University of California, was a study of the physical, chemical and biological factors affecting anaerobic sedimentation. In addition to the hydrographic cast and STD data reported herein, the expedition made 90 bathythermograph lowerings, collected 100 surface plankton samples and 19 plankton pump samples, made 66 oblique net hauls and collected 105 bottom core samples.

The depth of the 9 Nansen bottle casts varied from 600 to approximately 5900 m; the casts consisted of 18 bottles, with 20 bottles being lowered for the overlapping deep casts on 2 stations.

Temperature from the bottle casts and STD recordings agreed very well. The salinity sensor appeared to have drifted continuously. Adjustments resulted in some lowerings where no correction was needed, while others required varying corrections, the greatest being 0.2 ‰ for all ranges.

On stations 16-19 and 21-25 the recording range for temperature and salinity on the STD analog was set full scale (temperature, 0-30°C; salinity, 31-39 ‰). The accuracy of the digitized values must therefore be considered less than that at the normally used ranges.

Personnel participating in the collection of data were:

Ship's Captain:

Davis, Laurence E.
RV Alexander Agassiz

Scientific personnel:

Soutar, A. (in charge)
Bryan, W. R.
Ferreira, S. M.
Fleminger, Dr. A.
Hester, A. W.
Mead, R. V.
Rosendahl, D. V.
Sievers, H. A.

A publication utilizing MUDDAUBER data is:

Veeh, H. H., W. C. Burnett, A. Soutar, 1973. Contemporary Phosphorites on the Continental Margin of Peru. Science, 181: 844-845.

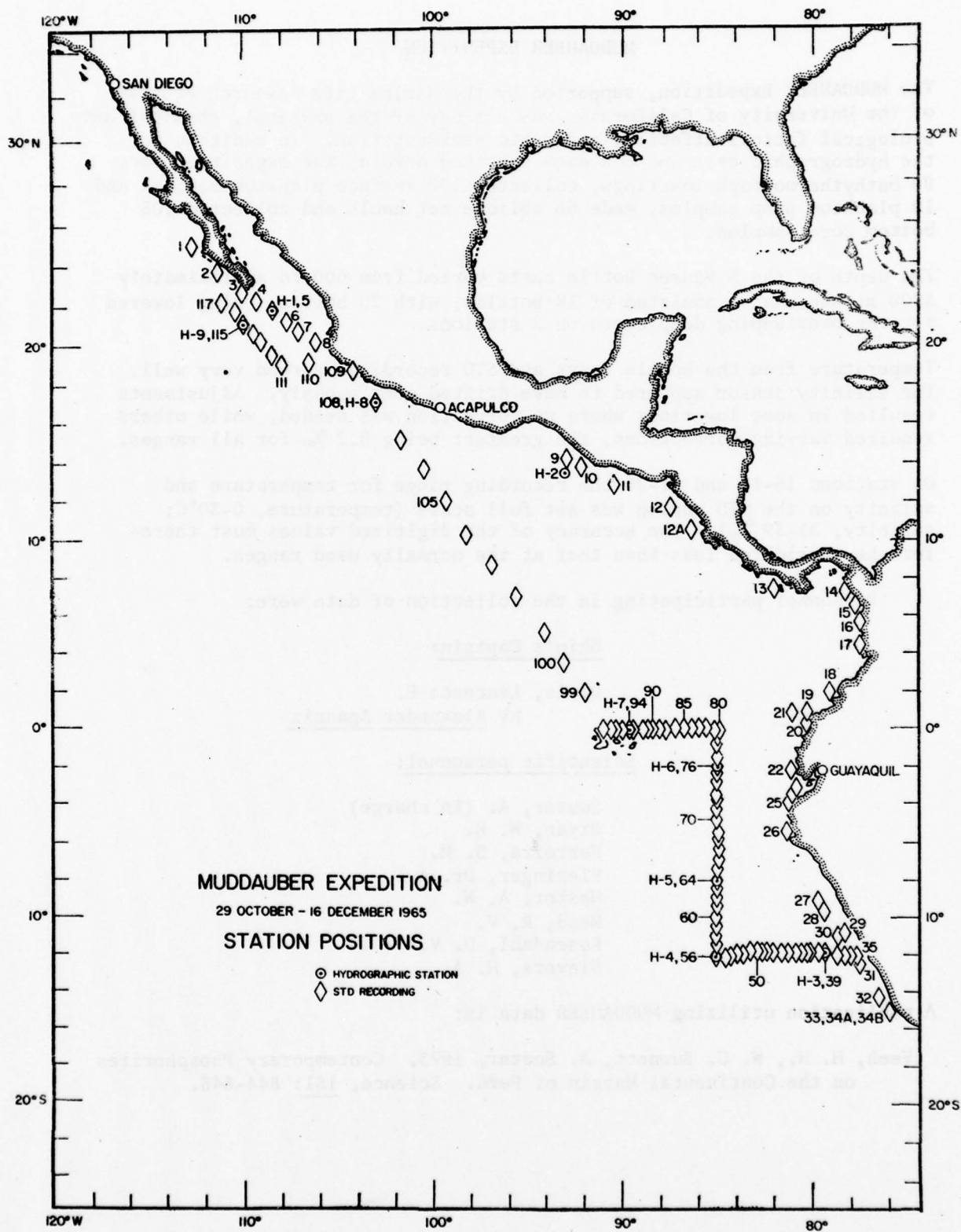


FIGURE 4

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LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
25 08.00		112 43.00		10/29/65		2311		GMT	520M						
Z	T	S	OZ	PC4	S103	N02	N03	DT	Z	T	S	OZ	S1GT	DT	DD
	C	25.75	34.66									22.876	499.2		0
	10	25.20	34.66									23.045	483.1		.049
	20	24.92	34.65									23.122	475.7		.097
	30	24.76	34.65									23.171	471.1		.145
	50	20.04	34.06									24.055	386.7		.231
	75	16.48	34.21									25.049	292.0		.316
	100	15.56	34.48									25.466	252.3		.385
	125	14.56	34.64									25.809	219.8		.445
	150	13.45	34.65									26.049	196.9		.498
	200	12.14	34.68									26.333	170.0		.592
	250	11.62	34.66									26.416	162.1		.677
	300	11.12	34.64									26.493	154.8		.760
	400	10.62	34.61									26.559	148.5		.915

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[illegible]

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LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
22 47.5N		110 00.0W		10/30/65		1960		GMT								
Z	T	S	O2	PO4	SI03	NO2	NO3	OT	Z	T	S		O2	SIGT	DT	DD
									C	27.90	34.49			22.065	576.8	0
									10	27.69	34.50			22.141	569.5	.057
									20	27.49	34.56			22.251	559.0	.114
									30	26.87	34.45			22.367	547.9	.169
									50	22.32	34.17			22.519	437.8	.268
									75	17.43	34.10			24.741	321.3	.364
									100	15.37	34.28			25.355	262.9	.437
									125	13.67	34.41			25.819	218.8	.498
									150	13.03	34.60			26.096	192.5	.551
									200	12.29	34.70			26.319	171.3	.644
									250	11.42	34.70			26.484	155.6	.728
									300	10.79	34.67			26.576	146.9	.807
									400	9.26	34.59			26.775	128.0	.952
									500	7.71	34.52			26.960	110.4	1.080
									600	6.50	34.48			27.098	97.4	1.192

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LATITUDE 22 20.0N		LONGITUDE 109 16.0W		MO/DAY/YR 10/31/65		MESSENGER CC03		TIME GMT	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
Z	T	S	C2	P04	S103	N02	N03	DT	Z	T	S	O2	S1GT	DT	DD
									C	27.77	34.50		22.115	572.0	0
									10	27.49	34.49		22.198	564.1	.057
									20	27.42	34.47		22.206	563.3	.117
									30	26.28	34.51		22.598	525.8	.168
									50	21.88	34.12		23.604	429.7	.264
									75	15.92	34.15		25.132	284.1	.353
									100	13.75	34.30		25.718	228.4	.418
									125	12.63	34.55		26.137	188.6	.471
									150	12.67	34.74		26.276	175.4	.517
									200	12.03	34.76		26.416	162.1	.604
									250	11.27	34.73		26.535	150.8	.685
									300	10.63	34.68		26.612	143.5	.762
									400	8.95	34.56		26.802	125.5	.903
									500	7.82	34.54		26.960	110.5	1.030
									600	6.81	34.51		27.080	99.1	1.143

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

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LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
21 51.0N		108 30.8W		10/31/65		C5C5		GMT					Z T S		
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD
									C	28.48	34.31		21.740	607.9	0
									10	28.29	34.38		21.855	596.9	.060
									20	28.02	34.38		21.944	588.4	.120
									30	27.41	34.49		22.224	561.6	.177
									50	21.85	34.40		23.825	408.7	.275
									75	18.43	34.65		24.917	304.6	.364
									100	15.82	34.65		25.538	245.5	.434
									125	14.62	34.77		25.896	211.5	.492
									150	13.62	34.84		26.161	186.3	.542
									200	12.32	34.77		26.368	166.7	.633
									250	11.80	34.75		26.452	158.7	.717
									300	11.28	34.73		26.533	150.9	.798
									400	9.82	34.63		26.713	133.9	.948
									500	8.12	34.53		26.907	115.5	1.081
									600	7.22	34.51		27.023	104.5	1.201

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

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LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
21 51.0N		108 30.8W		10/31/65		C545		GMT					Z T S		
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD
0	28.46	34.302						607.9	C	28.46	34.302		21.741	607.9	0
10	28.41	34.333	4.86					604.1	10	28.41	34.333	4.86	21.780	604.1	.061
30	27.38	34.499	4.32					560.0	20	27.90	34.415	4.59	22.011	582.0	.120
40	24.02	34.282	5.05					476.5	30	27.38	34.499	4.32	22.241	560.0	.177
55	21.06	34.562	3.74					376.3	50	21.87	34.438	4.35	23.848	406.5	.274
70	18.80	34.752U	2.26						75	18.08	34.703	1.93	25.044	292.4	.362
95	15.86	34.661	1.10					245.5	100	15.64	34.718	1.07	25.631	236.6	.429
115	15.16	34.855	1.54U					216.5	125	14.57	34.814	.93	25.942	207.1	.485
137	13.88	34.754	.86					197.7	150	13.48	34.806	.80	26.163	186.1	.535
155	13.36	34.830	.77					181.9	200	12.21	34.762	.20	26.384	165.1	.625
185	12.40	34.771	.20					168.1	250	11.86	34.771	.20	26.457	158.2	.709
221	12.08	34.764	.21					162.7	300	11.35	34.737	.20	26.525	151.7	.790
250	11.86	34.771	.20					158.2	400	9.95	34.658	.18	26.714	133.8	.940
301	11.34	34.735	.20					151.6	500	8.24	34.547	.21	26.902	116.0	1.074
355	10.66	34.696						142.8	600	7.20	34.524	.23	27.037	103.1	1.193
439	9.28	34.621	.18					126.0							
524	7.88	34.524	.22					112.5							
609	7.15	34.528	.23					102.2							

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

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LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
21 22.0N		107 45.0W		10/31/65		1114		GMT					Z T S		
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD
									C	28.44	34.36		21.791	603.1	0
									10	28.43	34.36		21.794	602.8	.060
									20	28.36	34.38		21.832	599.1	.120
									30	28.03	34.41		21.963	586.6	.180
									50	25.62	34.49		22.788	507.7	.290
									75	18.44	34.35		24.685	326.6	.394
									100	16.21	34.70		25.487	250.3	.467
									125	14.22	34.74		25.958	205.5	.525
									150	13.30	34.76		26.165	185.9	.575
									200	12.33	34.80		26.389	164.6	.665
									250	11.55	34.75		26.499	154.2	.747
									300	11.00	34.72		26.577	146.8	.826
									400	9.30	34.61		26.784	127.1	.970
									500	7.83	34.54		26.959	110.6	1.098
									600	6.88	34.52		27.078	99.3	1.212

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MUDDAUBER EXPEDITION

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LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		WIND SPEED		WEATHER		DOMINANT WAVES	
20 52.8N		107 00.0W		10/31/65		1618 GMT									
Z	T	S	C2	PC4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	CD
									C	28.83	34.26		21.587	622.6	0
									10	28.83	34.26		21.587	622.6	.062
									20	28.69	34.39		21.731	608.8	.124
									30	28.72	34.50		21.803	601.9	.185
									50	23.77	34.57		23.405	448.7	.290
									75	17.52	34.38		24.934	303.0	.384
									100	15.27	34.57		25.600	239.6	.453
									125	14.02	34.72		25.985	203.0	.509
									150	13.10	34.75		26.198	182.8	.558
									200	12.18	34.78		26.403	163.4	.647
									250	11.39	34.72		26.505	153.6	.729
									300	10.73	34.69		26.602	144.4	.807
									400	8.91	34.58		26.824	123.4	.948
									500	7.56	34.52		26.982	108.4	1.072
									600	6.32	34.50		27.138	93.6	1.181

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

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LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		WIND SPEED		WEATHER		DOMINANT WAVES	
20 19.6N		106 13.0W		10/31/65		2125 GMT		2302M							
Z	T	S	C2	PC4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	CD
									C	29.33	33.94		21.180	661.7	0
									10	29.33	33.94		21.180	661.7	.066
									20	29.20	34.12		21.358	644.6	.132
									30	28.82	34.16		21.515	629.5	.195
									50	26.37	34.15		22.299	554.4	.314
									75A	16.70	34.54		25.251	272.8	.418
									100	14.55	34.62		25.795	221.0	.480
									125	13.33	34.76		26.159	186.5	.532
									150	12.60	34.75		26.297	173.3	.578
									200	11.90	34.76		26.441	159.7	.664
									250	11.27	34.74		26.543	150.0	.744
									300	10.52	34.69		26.639	140.9	.820
									400	9.03	34.59		26.812	124.5	.960
									500	7.63	34.53		26.980	108.6	1.084
									600	6.66	34.52		27.108	96.4	1.195

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

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LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		WIND SPEED		WEATHER		DOMINANT WAVES	
14 26.0N		93 01.0W		11/04/65		1635 GMT		440M							
Z	T	S	C2	PC4	SIO3	NO2	NO3	DT	Z	T	S	C2	SIGT	DT	CD
									0	29.40	32.65		20.190	756.6	0
									10	28.74	33.31		20.904	688.1	.072
									20	27.00	33.52		21.627	618.8	.138
									30	20.61	34.39		24.155	377.2	.188
									50	16.69	34.73		25.399	258.7	.251
									75	14.03	34.87		26.099	192.2	.308
									100	13.32	34.88		26.254	177.5	.355
									125	12.97	34.88		26.324	170.8	.399
									150	12.63	34.85		26.369	166.5	.442
									200	11.85	34.82		26.497	154.4	.525
									250	11.39	34.80		26.567	147.7	.603
									300	10.64	34.76		26.672	137.7	.678
									400	8.58	34.64		26.923	114.0	.811

A) THE S/T/D TEMPERATURE RECORDING WAS ILLEGIBLE AT THIS DEPTH. THE VALUE HAS BEEN INTERPOLATED IN ORDER THAT DYNAMIC HEIGHT CALCULATIONS COULD BE COMPLETED.

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

H 2

LATITUDE 13 44.0N			LONGITUDE 93 03.0W			MO/DAY/YR 11/04/65			MESSENGER TIME 2220 0115GMT		BOTTOM 5955M	WIND 290	SPEED	WEATHER 0	DOMINANT WAVES 340 07 07		
Z	T	S	C2	PC4	SI03	NO2	NO3	DT	Z	T	S	C2	SIGT	CT	CD		
0	28.36	33.480	4.46					663.8	C	28.36	33.480	4.46	21.157	663.8	0		
10	25.88 A	33.937	4.33					555.2	10	25.88	33.937	4.33	22.291	555.2	.061		
30	17.02	34.772	1.18					263.1	20	21.35	34.336	2.85	23.914	400.3	.109		
51	15.07	34.835	.35					216.0	30	17.02	34.772	1.18	25.353	263.1	.142		
101	13.51	34.874	.28					181.6	50	15.16	34.831	.36	25.824	216.3	.190		
149	12.92	34.864	.35					171.0	75	13.95	34.872	.32	26.109	191.2	.243		
200	12.18	34.830	.32					159.7	100	13.52	34.874	.28	26.210	181.7	.291		
250	10.98	34.762	.27					143.4	125	13.17	34.874	.31	26.281	174.9	.337		
300	9.84	34.696	.32					129.3	150	12.91	34.863	.35	26.324	170.8	.381		
399	8.18	34.619	.28					109.7	200	12.18	34.830	.32	26.441	159.7	.466		
457	7.02	34.591	.22					95.8	250	10.98	34.762	.27	26.613	143.4	.544		
595	6.18	34.570	.31					86.7	300	9.84	34.696	.32	26.761	129.3	.616		
797	5.03	34.569	.31					73.3	400	8.17	34.619	.28	26.970	109.5	.742		
993	4.32	34.574	.56					65.4	500	6.99	34.591	.22	27.118	95.5	.852		
1192	3.68	34.586	.86					58.2	600	6.14	34.571	.31	27.215	86.3	.951		
1390	3.23	34.610	1.07					52.3	700	5.51	34.567	.31	27.293	78.9	1.042		
1589	2.84	34.619	1.65					48.2	800	5.02	34.570	.31	27.353	73.2	1.127		
1679B	2.69	34.632	1.63					45.9	1000	4.30	34.575	.57	27.438	65.1	1.285		
1690	2.66	34.627	1.82					46.1	1200	3.66	34.588	.87	27.514	57.9	1.428		
1923B	2.32	34.648	2.00					41.7	1500	3.01	34.615	1.42	27.599	50.0	1.620		
2172B	2.03	34.657	2.28					38.8	2000	2.22	34.652	2.09	27.697	40.7	1.897		
2418B	1.88	34.669	2.49					36.8	2500	1.86	34.671	2.56	27.741	36.5	2.141		
2664B	1.84	34.673	2.66					36.2	3000	1.85	34.675	2.73	27.745	36.1	2.378		
2911B	1.84	34.674	2.70					36.1	3500	1.85	34.675	2.74	27.742	36.4	2.624		
3157B	1.86	34.676	2.77					36.1	4000	1.94	34.674	2.80	27.737	36.8	2.883		
3400B	1.88	34.677	2.74					36.2	4500	2.00	34.677	2.83	27.734	37.1	3.155		
3646B	1.90	34.672	2.74					36.7	5000	2.07	34.679	2.83	27.730	37.5	3.440		
3843B	1.92	34.677	2.71					36.5	5500	2.13	34.674	2.59	27.721	38.3	3.741		
4038B	1.94	34.673	2.82					36.9									
4233B	1.96	34.672	2.81					37.2									
4429B	2.00	34.677	2.83					37.1									
4627B	2.01	34.676	2.82					37.2									
4825B	2.04	34.672	2.82					37.7									
5024B	2.07	34.679	2.83					37.4									
5221B	2.09	34.676	2.87					37.8									
5418B	2.13	34.670	2.34					38.6									
5616B	2.14	34.680	2.98					37.5									
5818B	2.18	34.679	2.67					38.3									

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

H 2

LATITUDE 13 44.0N			LONGITUDE 93 03.0W			MO/DAY/YR 11/04/65			MESSENGER TIME 2305		BOTTOM 5624M	WIND	SPEED	WEATHER	DOMINANT WAVES		
Z	T	S	C2	PC4	SI03	NO2	NO3	DT	Z	T	S	C2	SIGT	DT	CD		
									C	28.35	33.48		21.160	663.5	0		
									10	21.80	34.49		23.907	400.8	.053		
									20	18.97	34.57		24.720	323.4	.089		
									30	17.22	34.72		25.266	271.4	.119		
									50	15.43	34.80		25.741	226.2	.169		
									75	14.12	34.86		26.072	194.7	.222		
									100	13.61	34.89		26.202	182.4	.270		
									125	13.34	34.89		26.257	177.1	.316		
									150	13.04	34.88		26.310	172.1	.360		
									200	12.36	34.85		26.422	161.5	.446		
									250	11.10	34.77		26.597	144.9	.526		
									300	10.02	34.71		26.742	131.2	.598		
									400	8.28	34.63		26.961	110.3	.725		
									500	7.07	34.59		27.107	96.5	.836		
									600	6.25	34.57		27.202	87.5	.937		
									700	5.62	34.57		27.282	80.0	1.029		
									800	5.08	34.57		27.347	73.8	1.115		
									1000	4.33	34.57		27.431	65.8	1.274		
									1200	3.70	34.58		27.505	58.9	1.419		
									1500	3.07	34.62		27.597	50.1	1.613		

A) MEAN VALUE OF 25.98 AND 25.79 DEGREES.
B) CAST II.

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

10

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES	
13 54.5N		92 27.7W		11/05/65		0747		468M									
Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	CD		
									C	28.76	32.95		20.628	714.6	0		
									1C	28.53	32.93		20.689	708.7	.071		
									2C	27.99	33.00		20.918	686.8	.141		
									3C	23.47	34.27		23.266	462.0	.159		
									5C	19.05	34.68		24.783	317.3	.277		
									75	15.16	34.82		25.812	219.4	.344		
									10C	13.84	34.89		26.154	187.0	.356		
									125	13.34	34.89		26.257	177.1	.442		
									15C	13.05	34.89		26.316	171.6	.487		
									20C	12.46	34.86		26.410	162.6	.572		
									25C	11.94	34.83		26.487	155.3	.655		
									30C	11.13	34.78		26.600	144.6	.733		
									40C	9.4C	34.69		26.830	122.8	.874		

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

11

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES	
13 06.4N		90 31.3W		11/05/65		23C4		468M									
Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	CD		
									C	28.95	32.65		20.340	742.2	0		
									1C	28.34	32.85		20.691	708.5	.073		
									2C	28.08	33.00		20.889	689.6	.143		
									3C	26.9C	33.34		21.523	628.7	.209		
									5C	19.83	34.66		24.567	337.9	.305		
									75	15.88	34.79		25.632	236.6	.378		
									10C	14.01	34.85		26.088	193.3	.432		
									125	13.62	34.86		26.177	184.8	.480		
									15C	13.22	34.88		26.274	175.6	.526		
									20C	12.8C	34.88		26.358	167.5	.614		
									25C	12.2C	34.84		26.445	159.3	.699		
									30C	11.44	34.80		26.558	148.6	.779		
									40C	9.95	34.71		26.754	130.0	.927		

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

12

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES	
11 50.6N		87 33.3W		11/06/65		2217		356M									
Z	T	S	O2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	CD		
									C	28.77	32.62		20.377	738.6	0		
									1C	28.37	32.66		20.539	723.1	.073		
									2C	28.33	32.71		20.590	718.3	.145		
									3C	27.78	33.35		21.249	655.0	.214		
									5C	21.55	34.38		23.892	402.2	.320		
									75	18.15	34.69		25.017	295.1	.408		
									10C	15.79	34.80		25.660	233.9	.475		
									125	15.05	34.85		25.855	215.4	.532		
									15C	14.61	34.88		25.983	203.2	.585		
									20C	13.45	34.88		26.227	180.0	.683		
									25C	12.53	34.84		26.381	165.4	.772		
									30C	12.18	34.82		26.434	160.4	.857		

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

12 A

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES	
10 42.6N		86 32.3W		11/07/65		0831											
Z	T	S	C2	PO4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	CD		
									C	28.05	32.22		20.314	744.8	0		
									1C	27.60	32.88		20.954	683.3	.071		
									2C	24.93	33.72		22.418	543.0	.133		
									3C	22.1C	34.42		23.770	413.9	.181		
									5C	19.88	34.57		24.485	345.7	.257		
									75	17.32	34.81		25.311	267.1	.334		
									10C	15.07	34.87		25.875	213.5	.395		
									125	14.28	34.91		26.077	194.3	.447		
									15C	14.02	34.91		26.132	189.1	.496		
									20C	13.25	34.89		26.276	175.4	.589		
									25C	12.59	34.85		26.377	165.8	.677		
									30C	12.05	34.84		26.474	156.6	.761		
									40C	9.94	34.71		26.755	129.9	.913		

13

LATITUDE		LONGITUDE		MO/DAY/YR		PASSENGER		TIME		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES	
7 32.0N		82 04.0W		11/09/65		1711		GMT		459M									
Z	T	S	C2	P04	S103	N02	N03	DT		Z	T	S	C2	S1GT	DT		CD		
										CA	28.2C	30.36			18.873	883.4		C	
										1CA	28.18	30.93			19.306	841.7		.086	
										2C	27.67	31.50			19.897	784.8		.168	
										3C	27.37	32.13			20.465	730.2		.244	
										5C	24.75	33.30			22.156	568.1		.374	
										75	16.75	34.72			25.377	260.8		.478	
										10C	15.42	34.84			25.774	223.1		.539	
										125	14.81	34.88			25.939	207.3		.554	
										150	14.02	34.90			26.124	189.8		.644	
										20C	13.42	34.88			26.233	179.4		.735	
										25C	12.80	34.86			26.343	169.0		.829	
										30C	11.80	34.79			26.483	155.7		.914	
										4CC	10.28	34.72			26.705	134.7		1.067	

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LATITUDE 7 25.5N		LONGITUDE 78 25.0W		MO/DAY/YR 11/13/65		MESSENGER 1004		TIME GMT	BOTTOM 580M	WIND	SPEED	WEATHER	DOMINANT WAVES		
Z	T	S	C2	PC4	SI03	NC2	NO3	DT	Z	T	S	O2	SIGT	DT	CD
									GA	27.93	28.02		17.210	1043.8	0
									1CA	27.73	29.73		18.552	914.2	.058
									20	27.67	31.44		19.852	789.1	.183
									3C	27.47	32.05		20.373	739.0	.260
									50	16.95	34.70		25.315	266.7	.360
									75	15.22	34.91		25.872	213.7	.421
									100	14.94	34.91		25.934	207.8	.474
									125	14.87	34.91		25.949	206.4	.527
									150	14.66	34.89		25.980	203.5	.579
									200	13.99	34.89		26.123	189.9	.680
									250	13.39	34.87		26.232	179.6	.776
									300	12.08	34.80		26.437	160.1	.864
									400	9.31	34.65		26.814	124.3	1.014
									500	8.12	34.59		26.954	111.0	1.140

15

LATITUDE		LONGITUDE		MO/DAY/YR		PASSENGER		TIME	BOTTOM		WIND	SPEED	WEATHER	DOMINANT WAVES	
Z	T	S	C2	PD4	SI03	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	CD
									CA	27.66	27.02		16.549	1107.8	0
									1CA	27.81	28.50		17.607	1005.5	.106
									2CA	27.71	29.98		18.746	895.6	.2C1
									3C	27.51	31.45		19.911	783.5	.285
									50	18.25	34.47		24.824	313.4	.395
									75	15.83	34.91		25.735	226.7	.463
									100	15.31	34.93		25.868	214.1	.519
									125	15.02	34.92		25.924	208.8	.572
									150	14.58	34.90		26.005	201.1	.625
									200	13.95	34.89		26.131	189.1	.725
									250	12.95	34.82		26.282	174.8	.819
									300	12.00	34.79		26.445	159.3	.90

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LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES	
S 41.0N		77 25.2W		11/14/65		C149		GMT		431M		220		02KT		6			
Z	T	S	O2	PO4	SI03	NO2	NO3	DT	Z	T	S	O2	SI0T	DT	DD				
	CA	28.158	26.988										16.363	1125.8	0				
	1CA	27.65	28.48										17.643	1002.0	.106				
	2CA	27.60	29.98										18.781	892.2	.201				
	30	27.35	31.48										19.984	776.4	.265				
	50	26.25	33.66										23.696	420.9	.405				
	75	15.70	34.96										25.803	220.3	.485				
	100	15.25	34.98										25.920	209.2	.540				
	125	15.10	34.98										25.953	206.1	.592				
	150	14.90	34.98										25.997	201.9	.644				
	200	14.60	34.97										26.054	196.4	.747				
	250	13.65	34.93										26.224	180.3	.844				
	300	12.95	34.90										26.344	168.9	.935				
	400	10.05	34.70										26.729	132.4	1.094				

A) THE SALINITY VALUES AT THESE DEPTHS WERE LOWER THAN THE RANGE OF THE S/T/D ANALOGG RECORDING. THE VALUE OF THE WATER SAMPLE COLLECTED FROM THE SURFACE FOR CALIBRATION OF THE INSTRUMENT WAS TABULATED AND THE VALUES FOR OTHER DEPTHS WERE INTERPOLATED.

B) THE RANGE FOR THE ANALOG RECORDER WAS SET FULL-SCALE.

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LATITUDE 4 38.7N		LONGITUDE 77 32.2W		PC/DAY/YR 11/14/65		MESSENGER 11C5		TIME GMT	BOTTOM	WIND 180	SPEED 08KT	WEATHER 6	DOMINANT WAVES 220 04 04		
Z	T	S	C2	PC4	S103	NC2	NC3	DT	Z	T	S	C2	SIGT	DT	EC
									0	27.4CA		A			
									10	27.65					
									20	27.3C					
									30	27.2C	31.38		19.957	779.0	
									50	21.0C	33.90		23.678	422.6	
									75	15.6C	34.98		25.841	216.7	
									100	15.35	35.00		25.913	209.9	
									125	15.35	35.01		25.920	209.1	
									150	15.25	35.01		25.943	207.0	
									200	14.8C	34.98		26.019	199.8	
									250	14.05	34.95		26.156	186.7	
									300	13.2C	34.92		26.309	172.2	

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LATITUDE 2 00.8N		LONGITUDE 79 03.0W		MO/DAY/YR 11/15/65		MESSENGER 1312		TIME GMT		BOTTOM 971M		WIND 180		SPEED 08KT		WEATHER 2		DOMINANT WAVES 220 05 04	
Z	T	S	C2	PD4	STC3	NO2	NC3	CT	Z	T	S	C2	SIGT	CT	CD				
									0	27.05A									
									10	27.05									
									20	27.05									
									30	26.85									
									50	16.60	33.82		24.723	323.1					
									75	16.00	34.98		25.750	225.3					
									100	15.65	35.00		25.845	216.3					
									125	15.35	35.01		25.920	209.1					
									150	14.90	34.97		25.989	202.6					
									200	13.85	34.94		26.191	183.5					
									250	13.15	34.90		26.304	172.7					
									300	12.50	34.87		26.410	162.6					
									400	10.15	34.74		26.743	131.1					
									500	8.75	34.65		26.904	115.8					
									600	7.95	34.63		27.011	105.6					

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LATITUDE		LNGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
0 52.6N		80 15.3W		11/16/65		C74C		GMT	468P						
Z	T	S	C2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	CD
	C	25.9CA	31.66A										20.573	719.9	0
	10	25.95	31.80										20.663	711.3	.072
	20	25.85	32.17										20.972	681.6	.141
	30	25.85	32.25										21.032	675.8	.209
	50	16.90	33.54										24.439	350.1	.312
	75	16.25	35.06										25.754	224.9	.384
	100	16.10	35.07										25.797	220.9	.441
	125	15.40	35.02										25.917	209.5	.496
	150	15.05	35.00										25.979	203.6	.548
	200	14.10	34.98										26.169	185.5	.648
	250	12.90	34.91										26.362	167.2	.739
	300	12.60	34.90										26.414	162.3	.825
	400	9.65	34.74										26.828	123.0	.976

20

Z	LATITUDE		LONGITUDE		PC/DAY/YR		MESSENGER TIME		BOTTOM	WIND SPEED		WEATHER	DOMINANT WAVES			
	0 20.7N		80 23.8W		11/16/65		1227	GMT		356M						
	T	S	C2	PC4	SIG3	NC2	NC3	CT		Z	T	S	C2	SIGT	DT	CD
										0	25.43	32.67A		21.476	633.2	0
										1C	25.43	32.67		21.476	633.2	.063
										2C	25.43	32.67		21.476	633.2	.127
										3C	25.43	32.70		21.499	631.1	.190
										5C	16.27	35.08		25.765	223.9	.276
										75	15.66	35.06		25.885	212.5	.331
										10C	15.46	35.04		25.914	209.7	.384
										125	15.20	35.02		25.961	205.3	.437
										15C	14.78	34.98		26.023	199.4	.489
										20C	13.45	34.94		26.273	175.6	.585
										25C	12.60	34.92		26.429	160.8	.672
										30C	11.50	34.82		26.563	148.2	.753

A) THE RANGE FOR THE ANALOG RECORDER WAS SET FULL SCALE.

RV ALEXANDER AGASSIZ

MUCCAUBER EXPEDITION

21

LATITUDE		LONGITUDE		MC/DAY/YR		MESSENGER TIME		BOTTOM		WIND SPEED		WEATHER		DOMINANT WAVES	
0 58.05		81 04.9W		11/16/65		2310		487M							
Z	T	S	C2	PG4	SI03	NC2	NC3	DT	Z	T	S	O2	SIGT	DT	CO
									C	24.1CA	33.44A		22.455	539.5	0
									1C	24.1C	33.44		22.455	539.5	.054
									2C	23.75	33.46		22.572	528.3	.107
									3C	23.65	33.48		22.617	524.0	.160
									5C	16.8C	35.06		25.626	237.1	.237
									75	16.15	35.08		25.793	221.3	.294
									10C	15.75	35.05		25.861	214.8	.349
									125	15.05	35.02		25.995	202.1	.402
									15C	14.55	34.98		26.073	194.7	.453
									200	14.05	34.98		26.179	184.5	.550
									25C	13.3C	34.94		26.304	172.7	.643
									30C	12.75	34.90		26.384	165.1	.731
									40C	1C.1C	34.76		26.767	128.8	.886

RV ALEXANDER AGASSIZ

MUCCAUBER EXPEDITION

22

LATITUDE		LONGITUDE		MC/DAY/YR		MESSENGER TIME		BOTTOM		WIND SPEED		WEATHER		DOMINANT WAVES	
2 14.35		81 11.0W		11/17/65		0811		694M							
Z	T	S	C2	PG4	SI03	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	CO
									C	23.25A	33.65A		22.861	500.7	0
									10	23.25	33.65		22.861	500.7	.050
									2C	23.25	33.65		22.861	500.7	.100
									3C	22.7C	33.86		23.177	470.5	.149
									5C	17.1C	35.08		25.570	242.4	.220
									75	15.95	35.09		25.846	216.2	.278
									100	15.55	35.07		25.922	209.0	.332
									125	14.85	35.00		26.023	199.4	.384
									150	14.35	35.01		26.139	188.4	.433
									20C	13.6C	34.97		26.266	176.4	.527
									250	13.35	34.96		26.309	172.2	.617
									30C	12.85	34.92		26.379	165.5	.705
									40C	1C.1C	34.76		26.767	128.8	.861
									50C	9.15	34.70		26.879	118.1	.994
									60C	7.95	34.65		27.027	104.1	1.115

RV ALEXANDER AGASSIZ

MUCCAUBER EXPEDITION

23

LATITUDE		LONGITUDE		MC/DAY/YR		MESSENGER TIME		BOTTOM		WIND SPEED		WEATHER		DOMINANT WAVES	
3 06.05		80 58.8W		11/17/65		1754		416M		240 05KT		2		07 07	
Z	T	S	C2	PG4	SI03	NC2	NC3	DT	Z	T	S	O2	SIGT	DT	CO
									C	22.35A	34.03A		23.405	448.8	0
									1C	22.35	34.03		23.405	448.8	.045
									2C	20.22	34.42		24.282	365.1	.086
									3C	17.0C	35.04		25.563	243.1	.116
									5C	16.1C	35.07		25.797	220.9	.163
									75	15.45	35.06		25.936	207.6	.217
									10C	15.1C	35.03		25.991	202.4	.269
									125	14.9C	35.04		26.043	197.5	.320
									15C	14.6C	35.02		26.093	192.8	.369
									20C	13.9C	34.98		26.211	181.5	.465
									25C	13.3C	34.96		26.320	171.2	.557
									30C	12.75	34.90		26.384	165.1	.645

RV ALEXANDER AGASSIZ

MUCCAUBER EXPEDITION

24

LATITUDE		LONGITUDE		MC/DAY/YR		MESSENGER TIME		BOTTOM		WIND SPEED		WEATHER		DOMINANT WAVES	
3 27.75		81 00.0W		11/17/65		2036		378M		250 14KT		1		220 06 06	
Z	T	S	C2	PG4	SI03	NC2	NC3	DT	Z	T	S	O2	SIGT	DT	CO
									C	23.1CA	34.02A		23.184	469.8	0
									1C	22.15	34.11		23.521	437.6	.045
									2C	18.35	35.05		25.242	273.6	.081
									3C	17.7C	35.04		25.395	259.1	.108
									5C	16.7C	35.11		25.688	231.2	.157
									75	15.7C	35.10		25.911	210.0	.213
									10C	15.35	35.09		25.982	203.3	.265
									125	14.85	35.05		26.061	195.7	.316
									15C	14.6C	35.02		26.093	192.8	.365
									20C	13.7C	34.96		26.237	179.1	.461
									25C	13.0C	34.95		26.373	166.2	.550
									30C	12.65	34.92		26.419	161.8	.636

A) THE RANGE FOR THE ANALOG RECORDER WAS SET FULL SCALE.

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

25

LATITUDE 3 52.55			LONGITUDE 81 12.8W		MO/DAY/YR 11/18/65		MESSENGER TIME 0233		BOTTOM 490M	WIND 200	SPEED 19KT	WEATHER	DOMINANT WAVES 200 05 05		
Z	T	S	C2	PC4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									C	21.9CA	34.30A		23.735	417.2	0
									1C	21.85	34.30		23.749	415.9	.042
									20	17.9C	35.09		25.384	260.1	.076
									3C	16.4C	35.12		25.766	223.9	.100
									5C	15.6C	35.10		25.933	207.9	.143
									75	15.2C	35.07		26.000	201.6	.195
									100	14.65	35.04		26.097	192.3	.245
									125	14.3C	35.02		26.157	186.7	.293
									15C	14.15	35.00		26.174	185.1	.340
									200	13.55	34.95		26.261	176.8	.433
									25C	12.85	34.94		26.395	164.1	.522
									300	12.7C	34.92		26.409	162.7	.607
									40C	9.7C	34.76		26.835	122.3	.758

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

26

LATITUDE 5 28.35			LONGITUDE 81 21.0W		MO/DAY/YR 11/18/65		MESSENGER TIME 1325		BOTTOM 412M	WIND	SPEED	WEATHER	DOMINANT WAVES		
Z	T	S	O2	PC4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									C	18.03	35.10		25.360	262.5	0
									1C	17.78	35.09		25.413	257.3	.026
									2C	17.5C	35.10		25.489	250.1	.051
									3C	17.28	35.10		25.542	245.1	.076
									5C	15.99	35.10		25.845	216.3	.123
									75	15.45	35.07		25.944	206.9	.176
									10C	14.99	35.04		26.023	199.4	.227
									125	14.73	35.01		26.057	196.2	.278
									150	14.41	34.99		26.111	191.1	.327
									20C	13.95	34.97		26.184	184.1	.423
									25C	13.22	34.93		26.313	171.9	.516
									30C	12.46	34.90		26.441	159.7	.602
									40C	9.62	34.71		26.809	124.8	.752

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

27

LATITUDE 9 08.45			LONGITUDE 79 47.5W		MO/DAY/YR 11/20/65		MESSENGER TIME 0428		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
Z	T	S	O2	PC4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									C	18.85	35.17		25.208	276.9	0
									1C	18.64	35.16		25.253	272.6	.027
									2C	18.15	35.12		25.335	264.8	.054
									3C	17.57	35.04		25.426	256.1	.081
									5C	16.58	35.02		25.647	235.1	.130
									75	14.93	35.00		26.005	201.1	.185
									10C	14.32	34.98		26.122	190.0	.234
									125	13.77	34.97		26.230	179.7	.281
									15C	13.45	34.95		26.273	175.7	.327
									20C	12.43	34.91		26.455	158.4	.413
									25C	11.98	34.88		26.518	152.4	.493
									30C	11.23	34.83		26.620	142.7	.570
									40C	9.34	34.71		26.856	120.3	.710
									50C	8.16	34.64		26.988	107.9	.832
									60C	7.13	34.59		27.099	97.3	.944

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

28

LATITUDE 9 42.55			LONGITUDE 79 27.0W		MO/DAY/YR 11/20/65		MESSENGER TIME 1437		BOTTOM 412M	WIND 180	SPEED 02KT	WEATHER 2	DOMINANT WAVES 150 04 07		
Z	T	S	O2	PC4	SIO3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	DD
									C	19.55	35.29		25.109	286.3	0
									1C	19.56	35.30		25.124	284.8	.029
									2C	19.5C	35.29		25.132	284.1	.057
									3C	19.06	35.23		25.200	277.6	.085
									5C	16.68	35.06		25.654	234.4	.137
									75	15.28	35.04		25.959	205.5	.192
									10C	14.75	35.00		26.045	197.3	.243
									125	14.40	34.99		26.113	190.9	.293
									15C	14.18	34.99		26.160	186.4	.341
									20C	13.55	34.97		26.268	176.2	.434
									25C	12.45	34.90		26.443	159.5	.521
									30C	11.57	34.85		26.573	147.2	.601

A) THE RANGE FOR THE ANALOG RECORDER WAS SET FULL SCALE.

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

29

LATITUDE 10 48.9S			LONGITUDE 78 34.0W		MO/DAY/YR 11/21/65		MESSENGER TIME 0538		BOTTOM 359M	WIND	SPEED	WEATHER	DOMINANT WAVES		
Z	T	S	C2	PC4	SI03	NC2	NC3	DT	Z	T	S	O2	SIGT	DT	CD
									0	19.62	35.30		25.109	286.3	0
									10	19.60	35.30		25.114	285.8	.029
									20	19.49	35.30		25.143	283.1	.057
									30	19.43	35.29		25.151	282.3	.085
									50	17.60	35.10		25.465	252.4	.139
									75	16.57	35.05		25.672	232.7	.200
									100	14.43	34.98		26.099	192.2	.254
									125	13.50	34.95		26.271	175.9	.301
									150	13.07	34.93		26.343	169.0	.345
									200	12.73	34.92		26.403	163.3	.430
									250	12.38	34.90		26.457	158.2	.514
									300	11.75	34.86		26.547	149.7	.594

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

30

LATITUDE 11 00.0S			LONGITUDE 78 15.0W		MO/DAY/YR 11/21/65		MESSENGER TIME 1017		BOTTOM 446M	WIND	SPEED	WEATHER	DOMINANT WAVES		
Z	T	S	C2	PC4	SI03	NC2	NC3	DT	Z	T	S	O2	SIGT	DT	CD
									0	19.70	35.30		25.088	288.3	0
									10	19.68	35.30		25.093	287.8	.029
									20	19.56	35.29		25.117	285.5	.058
									30	19.33	35.28		25.169	280.6	.086
									50	16.08	34.92		25.686	231.4	.137
									75	14.14	34.96		26.145	187.8	.190
									100	13.58	34.95		26.254	177.4	.237
									125	13.34	34.94		26.296	173.5	.281
									150	13.10	34.94		26.345	168.8	.325
									200	12.67	34.92		26.415	162.2	.410
									250	12.14	34.88		26.488	155.3	.492
									300	11.46	34.84		26.586	146.0	.571
									400	9.92	34.74		26.782	127.3	.716

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

31

LATITUDE 12 26.8S			LONGITUDE 77 32.9W		MO/DAY/YR 11/22/65		MESSENGER TIME 0007		BOTTOM 457M	WIND	SPEED	WEATHER	DOMINANT WAVES		
Z	T	S	C2	PC4	SI03	NC2	NC3	DT	Z	T	S	O2	SIGT	DT	CD
									0	19.77	35.30		25.070	290.0	0
									10	19.24	35.28		25.192	278.4	.028
									20	18.22	35.10		25.313	266.9	.056
									30	16.28	35.00		25.701	230.0	.081
									50	14.70	34.95		26.017	200.0	.124
									75	13.87	34.97		26.209	181.7	.172
									100	13.55	34.95		26.252	177.6	.218
									125	13.52	34.96		26.274	175.5	.263
									150	13.18	34.94		26.329	170.4	.307
									200	12.93	34.92		26.363	167.1	.393
									250	12.66	34.89		26.394	164.2	.479
									300	11.68	34.81		26.521	152.1	.562
									400	10.03	34.74		26.763	129.1	.710

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

32

LATITUDE 14 06.0S			LONGITUDE 76 32.5W		MO/DAY/YR 11/22/65		MESSENGER TIME 1825		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
Z	T	S	C2	PC4	SI03	NC2	NC3	DT	Z	T	S	O2	SIGT	DT	CD
									0	17.50	35.00		25.413	257.4	0
									10	16.06	34.98		25.737	226.6	.024
									20	15.53	34.95		25.834	217.4	.046
									30	14.77	34.90		25.963	205.1	.068
									50	13.80	34.95		26.209	181.8	.107
									75	13.52	34.95		26.267	176.2	.152
									100	13.17	34.93		26.323	170.9	.196
									125	12.90	34.91		26.362	167.2	.239
									150	12.82	34.91		26.378	165.7	.281
									200	12.54	34.90		26.425	161.2	.365
									250	11.92	34.85		26.507	153.5	.447

33

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
14 59.05		75 57.34		11/22/65		2259		GMT							
Z	T	S	C2	PC4	SIG3	NC2	NC3	CT	Z	T	S	C2	SIGT	DF	EC
									CA	18.01	35.03		25.311	267.1	0
									1C	17.70	34.98		25.349	263.5	.027
									20	16.57	35.00		25.634	236.4	.052
									3C	15.58	34.93		25.807	219.9	.074
									5C	13.85	34.97		26.205	182.1	.115
									75	13.58	34.97		26.270	176.0	.160
									10C	13.44	34.96		26.291	174.0	.204
									125	13.32	34.94		26.300	173.1	.249
									15C	13.01	34.94		26.363	167.1	.292
									20C	12.37	34.90		26.459	158.0	.376
									25C	11.87	34.86		26.524	151.8	.456
									30C	11.53	34.85		26.580	146.5	.534

34 A

LATITUDE 14 59.6S		LONGITUDE 75 58.6W		MO/DAY/YR 11/23/65		MESSENGER 0258		TIME GMT		BOTTOM		WIND SPEED		WEATHER		DOMINANT WAVES	
Z	T	S	O2	PO4	SI03	NO2	NO3	DT	Z	T	S	O2	SI02	DT	CC		
	G	18.27	35.04										25.254	272.5	0		
	10	18.02	35.01										25.293	268.8	.027		
	20	16.80	35.01										25.588	240.8	.053		
	30	16.13	35.00										25.736	226.7	.076		
	50	14.33	34.94										26.089	193.1	.118		
	75	13.75	34.96										26.227	180.0	.165		
	100	13.48	34.95										26.275	175.5	.210		
	125	13.37	34.95										26.298	173.3	.255		
	150	13.00	34.93										26.357	167.7	.298		
	200	12.52	34.91										26.437	160.1	.383		
	250	12.01	34.87										26.505	153.6	.464		
	300	11.57	34.84										26.565	147.9	.543		
	400	10.42	34.77										26.719	133.3	.691		

34 R

LATITUDE 14 59.65		LONGITUDE 75 58.6W		MO/DAY/YR 11/23/65		MESSENGER 0306		TIME GMT	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
Z	T	S	C2	PG4	SI03	NO2	NO3	OT	Z	T	S	O2	SIGT	OT	CD
									C	18.23	35.03		25.257	272.3	0
									10	18.12	35.01		25.269	271.1	.027
									20	16.90	34.98		25.541	245.2	.053
									30	16.18	34.99		25.717	228.5	.077
									50	14.60	34.96		26.047	197.2	.120
									75	13.78	34.97		26.228	179.9	.167
									100	13.49	34.95		26.273	175.7	.212
									125	13.38	34.95		26.295	173.5	.257
									150	13.00	34.93		26.357	167.7	.300
									200	12.51	34.90		26.431	160.6	.385
									250	11.97	34.87		26.513	152.9	.466
									300	11.57	34.84		26.565	147.9	.545

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LATITUDE 12 02.05			LONGITUDE 77 42.0w			PC/DAY/YR 11/27/65		MESSENGER TIME 1721		GMT		BOTTOM		WIND SPEED		WEATHER		DOMINANT WAVES	
Z	T	S	C2	PG4	SIG3	NC2	NC3	DT	Z	T	S	C2	SIGT	DT	CC				
	0								0	20.50	35.25		24.838	312.1	0				
	10								10	19.96	35.25		25.012	295.5	.030				
	20								20	19.82	35.28		25.041	292.7	.060				
	30								30	19.00	35.20		25.193	278.3	.089				
	50								50	15.96	35.07		25.829	217.9	.138				
	75								75	15.15	35.00		25.957	205.7	.192				
	100								100	13.87	34.97		26.209	181.7	.241				
	125								125	13.63	34.96		26.252	177.7	.287				
	150								150	13.61	34.96		26.256	177.3	.332				

A) THE START DOWN TIME IS QUESTIONABLE.

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

36

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES	
12 00.05		78 00.7W		11/27/65		2113		1620M									
Z	T	S	C2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	CC		
									0	20.70	35.35		24.861	309.9	0		
									10	20.12	35.35		25.016	295.2	.030		
									20	20.07	35.35		25.029	293.9	.060		
									30	20.02	35.34		25.034	293.4	.089		
									50	18.66	35.26		25.325	265.8	.145		
									75	15.60	34.98		25.841	216.7	.206		
									100	13.78	34.88		26.159	186.5	.257		
									125	13.03	34.85		26.289	174.1	.303		
									150	12.93	34.92		26.363	167.1	.347		
									200	12.41	34.89		26.443	159.5	.431		
									250	11.75	34.85		26.539	150.4	.511		
									300	11.27	34.81		26.597	144.9	.588		
									400	10.00	34.73		26.761	129.4	.733		
									500	8.37	34.62		26.940	112.4	.863		
									600	7.48	34.58		27.041	102.8	.980		
									700	6.54	34.54		27.140	95.4	1.088		
									800	5.83	34.52		27.216	86.2	1.189		
									1000	4.47	34.52		27.376	71.0	1.366		
									1200	3.77	34.54		27.466	62.5	1.520		
									1500	3.08	34.57		27.557	53.9	1.726		

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

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LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES	
11 59.05		78 23.0W		11/27/65		2347		2233M		140		08KT		1		170 06 06	
Z	T	S	C2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	CC		
									0	20.42	35.33		24.921	304.2	0		
									10	19.98	35.32		25.030	293.8	.030		
									20	19.92	35.33		25.053	291.6	.059		
									30	19.78	35.29		25.059	291.0	.088		
									50	17.35	35.00		25.449	254.0	.143		
									75	14.65	34.78		25.897	211.4	.202		
									100	13.51	34.92		26.233	179.4	.251		
									125	13.00	34.92		26.349	168.4	.296		
									150	12.71	34.90		26.392	164.4	.338		
									200	12.22	34.87		26.465	157.5	.421		
									250	11.80	34.85		26.529	151.3	.501		
									300	11.17	34.81		26.616	143.1	.578		
									400	10.14	34.75		26.749	130.5	.723		
									500	8.60	34.63		26.912	115.0	.854		
									600	7.32	34.57		27.056	101.4	.972		

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

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LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES	
11 59.55		78 40.0W		11/28/65		0139		3336M		160		14KT		1		150 06 06	
Z	T	S	C2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	CC		
									0	20.30	35.33		24.953	301.2	0		
									10	20.21	35.33		24.976	298.9	.030		
									20	19.98	35.33		25.037	293.1	.060		
									30	19.95	35.33		25.045	292.4	.089		
									50	17.70	35.05		25.402	258.4	.144		
									75	14.75	34.92		25.983	203.2	.203		
									100	13.47	34.88		26.223	180.4	.251		
									125	12.83	34.88		26.352	168.1	.295		
									150	12.64	34.91		26.404	163.3	.338		
									200	12.20	34.88		26.476	156.4	.420		
									250	11.73	34.85		26.543	150.1	.499		
									300	11.18	34.82		26.622	142.6	.576		
									400	9.96	34.73		26.768	128.7	.719		
									500	8.45	34.63		26.935	112.8	.849		
									600	7.12	34.55		27.069	100.2	.965		

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MUDDAUBER EXPEDITION

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LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME			BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
11 58.05		79 21.7W		11/28/65		0636 1049GMT			6030M	180	14KT	2			
Z	T	S	C2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	CC
0	20.08	35.347	5.61					294.4	C	20.08	35.347	5.61	25.024	294.4	0
11	20.10	35.341	6.30					295.3	1C	20.10	35.341	6.26	25.015	295.3	.030
35	20.05	35.339	5.61					294.2	2C	20.08	35.340	6.04	25.018	294.9	.059
59	18.09	35.212	3.72					255.7	3C	20.06	35.339	5.75	25.023	294.5	.089
88	15.35	35.024	.70					208.1	50	18.95	35.266	4.53	25.255	272.4	.146
118	13.64	34.939	.29					179.4	75	16.54	35.100	1.94	25.719	228.3	.209
147	12.87	34.930	.27					165.2	100	14.54	34.979	.54	26.074	194.5	.262
195	12.41	34.909	.35					158.1	125	13.40	34.934	.29	26.280	175.0	.309
244	11.94	34.879	.41					151.7	150	12.83	34.928	.27	26.391	164.4	.353
292	11.29	34.839	.35					143.1	200	12.37	34.906	.36	26.464	157.5	.435
389	10.06	34.758	.24					128.3	250	11.86	34.873	.41	26.536	150.7	.515
486	8.51	34.651	.44					112.1	300	11.19	34.833	.33	26.630	141.8	.592
584	7.29	34.583	.44					100.0	400	9.88	34.745	.26	26.792	126.4	.734
777	5.56	34.541	.64					81.4	500	8.32	34.640	.44	26.963	110.2	.861
972	4.48	34.546						69.2	600	7.12	34.577	.45	27.090	98.2	.974
1166	3.82	34.568	1.61					60.9	700	6.16	34.548	.53	27.197	88.0	1.077
1363	3.27	34.588	1.88					54.3	800	5.40	34.540	.69	27.285	79.7	1.171
1388A	3.27	34.592	1.87					54.0	1000	4.37	34.549	1.19	27.410	67.8	1.338
1564	2.87	34.614	2.13					48.8	1200	3.65	34.572	1.68	27.499	59.4	1.485
1582A	2.89	34.614	2.07					49.0	1500	2.99	34.609	2.09	27.595	50.3	1.680
1775A	2.56	34.632	2.28					44.9	2000	2.27	34.647	2.47	27.688	41.4	1.961
2018A	2.25	34.658U	2.83U						2500	1.92	34.672	3.09	27.737	36.9	2.209
2260A	2.08	34.663	2.73					38.7	3000	1.80	34.682	3.26	27.754	35.3	2.445
2501A	1.92	34.672	3.09					36.9	3500	1.81	34.687	3.23	27.757	34.9	2.683
2743A	1.81	34.682	3.17					35.3	4000	1.78	34.691	3.57	27.762	34.4	2.927
2986A	1.80	34.681	3.26					35.3	4500	1.78	34.695	3.82	27.766	34.1	3.177
3227A	1.79	34.684	3.25					35.0	5000	1.81	34.697	3.84	27.765	34.2	3.435
3468A	1.81	34.687	3.22					34.9	5500	1.88	34.695	3.76	27.758	34.8	3.705
3710A	1.81	34.687	3.33					34.9							
3953A	1.78	34.690	3.54					34.5							
4195A	1.79	34.692	3.66					34.4							
4440A	1.78	34.695	3.81					34.1							
4685A	1.78	34.693	3.84					34.2							
4932A	1.80	34.696	3.84					34.2							
5178A	1.84	34.696	3.84					34.4							
5424A	1.87	34.694	3.38U					34.8							
5670A	1.89	34.696	4.08U					34.8							
5917A	1.94	34.694	3.51					35.3							

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MUDDAUBER EXPEDITION

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LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
11 58.05		79 21.7W		11/28/65		0921		6049M							
Z	T	S	C2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	CC
									C	20.08	35.36		25.034	293.5	0
									1C	20.08	35.36		25.034	293.5	.029
									20	20.03	35.36		25.047	292.2	.059
									30	19.87	35.32		25.059	291.1	.088
									50	18.58	35.26		25.345	263.9	.144
									75	15.75	34.99		25.815	219.2	.205
									100	13.92	34.92		26.160	186.3	.256
									125	13.12	34.91		26.317	171.4	.301
									150	12.73	34.94		26.419	161.8	.344
									200	12.27	34.90		26.478	156.2	.426
									250	11.69	34.86		26.558	148.6	.505
									300	11.13	34.81		26.623	142.4	.581
									400	9.87	34.73		26.783	127.3	.724
									500	8.42	34.64		26.948	111.6	.852
									600	7.20	34.56		27.065	100.5	.967
									700	5.97	34.53		27.207	87.1	1.071
									800	5.23	34.52		27.290	79.2	1.163
									1000	4.25	34.53		27.408	68.0	1.330
									1200	3.63	34.56		27.496	59.7	1.477
									1500	2.95	34.58		27.576	52.1	1.675

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LATITUDE 12 00.05			LONGITUDE 79 39.8W			PC/DAY/YR 11/28/65			PASSENGER TIME 1449 GNT			BOTTOM 4937M			WIND 140			SPEED 08KT			WEATHER 1			DOMINANT WAVES 150 06 10		
Z	T	S	C2	PC4	SIG3	NO2	NO3	DT	Z	T	S	DT	SIGT	DT	ED											
									C	20.18	35.30		24.962	300.3	0											
									1C	20.12	35.30		24.978	298.8	.030											
									2C	20.08	35.30		24.988	297.8	.060											
									3C	19.96	35.32		25.035	293.3	.090											
									5C	18.54	35.27		25.362	262.2	.145											
									75	14.73	34.94		26.003	201.3	.204											
									10C	13.65	34.95		26.240	178.8	.252											
									125	12.98	34.91		26.346	168.8	.266											
									15C	12.62	34.91		26.417	161.9	.338											
									20C	11.99	34.88		26.517	152.5	.419											
									25C	11.52	34.85		26.582	146.3	.497											
									30C	10.93	34.80		26.652	139.7	.572											
									40C	9.56	34.70		26.812	124.5	.711											
									50C	8.23	34.62		26.961	110.4	.837											
									60C	6.92	34.55		27.096	97.5	.957											

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LATITUDE 11 59.75			LONGITUDE 80 09.9W		MO/DAY/YR 11/28/65		MESSENGER 1732		TIME GMT	BOTTOM 4688M	WIND 140	SPEED 08KT	WEATHER 1	DOMINANT WAVES 150 04 06		
Z	T	S	C2	P04	S103	NC2	NC3	DT	Z	T	S		Q2	SIGT	DT	EE
									0	20.57	35.37			24.911	305.2	0
									10	20.32	35.37			24.978	298.8	.030
									20	20.26	35.37			24.994	297.3	.060
									30	19.83	35.34			25.084	288.6	.089
									50	17.63	35.11			25.465	252.4	.144
									75	16.55	35.07			25.692	230.8	.205
									100	14.75	34.94			25.999	201.7	.259
									125	13.31	34.90			26.271	175.8	.307
									150	12.78	34.90			26.378	165.7	.351
									200	12.25	34.89			26.474	156.5	.434
									250	11.47	34.83			26.576	146.9	.513
									300	10.93	34.80			26.652	139.7	.588
									400	9.55	34.70			26.813	124.4	.727
									500	8.03	34.61			26.984	108.2	.852
									600	6.92	34.55			27.096	97.5	.964

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LATITUDE 11 59.75			LNGITUDE 80 18.9W		MO/DAY/YR 11/28/65		MESSENGER 1918		TIME GMT	BOTTOM 4713M	WIND 150	SPEED 14KT	WEATHER 2	DOMINANT WAVES 160 04 08		
Z	T	S	C2	PD4	SIO3	NC2	NC3	DT	Z	T	S		Q2	SIGT	DT	ED
									0	20.42	35.36			24.943	302.1	0
									10	26.17	35.35			25.002	296.4	.030
									20	19.07	35.24			25.205	277.1	.059
									30	18.17	35.17			25.378	260.7	.086
									50	17.53	35.18			25.543	245.0	.136
									75	15.53	34.99			25.865	214.4	.194
									100	14.22	34.92			26.097	192.4	.246
									125	13.48	34.90			26.236	179.1	.293
									150	12.66	34.84			26.355	167.8	.337
									200	11.92	34.86			26.514	152.7	.420
									250	11.22	34.82			26.614	143.3	.497
									300	10.52	34.77			26.701	135.0	.569
									400	9.28	34.69			26.850	120.9	.705
									500	8.05	34.61			26.981	108.5	.828
									600	6.98	34.56			27.096	97.6	.940

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LATITUDE 11 59.75			LONGITUDE 80 36.0w		MC/DAY/YR 11/28/65		MESSENGER TIME 2128		BOTTOM 4564F		WIND 150		SPEED 14KT		WEATHER 1		DOMINANT WAVES 150 10 11	
Z	T	S	C2	PO4	SIO3	NC2	NC3	CT	Z	T	S	C2	SIGT	DT	ED			
	0		20.25						0	20.25	35.34		24.973	299.2	0			
	10		20.18						10	20.18	35.32		24.977	298.9	.030			
	20		19.50						20	19.50	35.27		25.117	285.5	.059			
	30		18.51						30	18.51	35.19		25.309	267.3	.087			
	50		17.63						50	17.63	35.24		25.565	242.9	.138			
	75		16.04						75	16.04	35.04		25.787	221.8	.197			
	100		13.54						100	13.54	34.91		26.232	179.6	.248			
	125		13.05						125	13.05	34.91		26.324	170.9	.292			
	150		12.67						150	12.67	34.87		26.377	165.8	.335			
	200		12.13						200	12.13	34.87		26.482	155.8	.418			
	250		11.38						250	11.38	34.81		26.577	146.8	.496			
	300		10.90						300	10.90	34.80		26.657	139.2	.571			
	400		9.30						400	9.30	34.69		26.847	121.2	.709			
	500		7.98						500	7.98	34.61		26.991	107.5	.832			
	600		6.91						600	6.91	34.56		27.106	96.7	.94			

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LATITUDE 11 59.05			LONGITUDE 80 57.1W			PC/DAY/YR 11/28/65		MESSENGER 2345		TIME GMT	BOTTOM 4564M	WIND 160	SPEED 14KT	WEATHER 1	DOMINANT WAVES 160 10	
Z	T	S	C2	PC4	SIG3	NC2	NC3	DT	Z	T	S	C2	SIG1	DT	EE	
	C		2C.30								35.37		24.983	298.3	0	
	1C		2C.32								35.37		24.978	298.8	.030	
	2C		2C.25								35.38		24.993	297.3	.060	
	3C		2C.18								35.38		25.023	294.5	.089	
	5C		19.2C								35.33		25.240	273.8	.147	
	75		16.48								35.10		25.732	227.1	.210	
	10C		13.75								34.91		26.188	183.7	.262	
	125		13.18								34.90		26.298	173.3	.307	
	15C		12.72								34.91		26.398	163.8	.350	
	20C		11.93								34.87		26.520	152.2	.431	
	25C		11.32								34.85		26.619	142.8	.508	
	30C		10.78								34.81		26.686	136.4	.581	
	40C		5.47								34.71		26.834	122.4	.718	
	50C		8.17								34.63		26.978	108.7	.842	
	60C		6.92								34.57		27.112	96.0	.954	

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LATITUDE 11 58.0S		LONGITUDE 81 21.0W		MO/DAY/YR 11/29/65		MESSENGER TIME 0245		TIME GMT		BOTTOM 4599M		WIND 140		SPEED 14KT		WEATHER Z		DOMINANT WAVES 160 10 10	
Z	T	S	OZ	PC4	SI03	NC2	NC3	CT		Z	T	S	OZ	SIGT	DT	CD			
										C	2C.32								
										10	2C.32								
										20	2C.30								
										30	2C.24								
										50	19.19								
										75	15.80								
										100	13.90								
										125	13.08								
										150	12.72								
										200	11.82								
										250	11.30								
										300	10.75								
										400	9.42								
										500	8.03								
										600	6.85								

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LATITUDE 11 58.05		LONGITUDE 81 21.0w		MO/DAY/YR 11/29/65		MESSENGER 0302		TIME GMT	BOTTOM 4599M	WIND 140	SPEED 14KT	WEATHER 2	DOMINANT WAVES 160 10 10		
Z	T	S	C2	PG4	SIG3	NC2	NC3	DT	Z	T	S	O2	SIGT	DT	CD
									0	20.32	35.30		24.924	303.9	0
									10	20.32	35.30		24.924	303.9	.030
									20	20.30	35.30		24.930	303.4	.061
									30	20.22	35.29		24.943	302.1	.091
									50	19.13	35.36		25.281	269.9	.149
									75	15.63	35.02		25.865	214.4	.210
									100	13.80	34.91		26.178	184.7	.260
									125	13.02					
									150	12.65					
									200	11.81					
									250	11.28					
									300	10.80					

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LATITUDE 11 57.45			LONGITUDE 81 42.0W			MO/DAY/YR 11/29/65		MESSENGER TIME C602		BOTTOM 4690M		WIND 170		SPEED 14KT		WEATHER 1		DOMINANT WAVES 170 08	
Z	T	S	02	P04	S103	N02	NC3	DT	Z	T	S	02	SIGT	DT	ED				
									C	20.34	35.40		24.995	297.1	0				
									10	20.34	35.40		24.995	297.1	.030				
									20	18.77	35.18		25.236	274.2	.058				
									30	18.32	35.23		25.387	259.8	.085				
									50	17.78	35.26		25.543	245.0	.136				
									75	16.40	35.04		25.704	229.7	.196				
									100	14.00	34.79		26.043	197.5	.250				
									125	13.24	34.92		26.301	173.0	.297				
									150	12.75	34.91		26.392	164.4	.340				
									200	11.88	34.84		26.507	153.5	.422				
									250	11.32	34.83		26.604	144.3	.499				
									300	10.81	34.80		26.673	137.7	.573				
									400	9.43	34.72		26.849	121.0	.710				
									500	8.06	34.65		27.010	105.7	.831				
									600	6.84	34.61		27.155	92.0	.939				

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LATITUDE 11 56.6S			LONGITUDE 82 02.0W		MO/DAY/YR 11/29/65		MESSENGER TIME 0813		BOTTOM 4724M	WIND 140	SPEED 14KT	WEATHER 2	DOMINANT WAVES 160 08		
Z	T	S	C2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	CD
									C	20.25	35.39		25.012	295.6	0
									10	20.25	35.39		25.012	295.6	.030
									20	20.25	35.39		25.012	295.6	.059
									30	18.90	35.25		25.256	272.3	.088
									50	17.87	35.21		25.483	250.7	.140
									75	16.69	35.13		25.705	229.6	.201
									100	13.92	34.88		26.130	189.3	.254
									125	12.87	34.86		26.329	170.3	.300
									150	12.40	34.88		26.437	160.1	.342
									200	11.85	34.88		26.543	150.0	.421
									250	11.33	34.86		26.625	142.2	.497
									300	10.82	34.81		26.679	137.1	.570
									400	9.64	34.75		26.837	122.1	.708
									500	8.35	34.65		26.966	109.9	.832
									600	7.00	34.58		27.109	96.3	.945

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LATITUDE 11 55.3S			LONGITUDE 82 22.4W		MO/DAY/YR 11/29/65		MESSENGER TIME 1052		BOTTOM 4517M	WIND 160	SPEED 14KT	WEATHER 2	DOMINANT WAVES 160 08 08		
Z	T	S	C2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	CD
									C	20.24	35.29		24.938	302.6	0
									10	20.24	35.29		24.938	302.6	.030
									20	20.24	35.29		24.938	302.6	.061
									30	19.87	35.28		25.028	294.0	.091
									50	19.55	35.38		25.188	278.8	.148
									75	18.14	35.28		25.470	252.0	.215
									100	14.51	34.92		26.035	198.2	.272
									125	13.28	34.88		26.262	176.7	.320
									150	12.61	34.87		26.388	164.7	.363
									200	11.70	34.84		26.541	150.3	.444
									250	11.33	34.85		26.617	143.0	.520
									300	10.86	34.82		26.680	137.0	.593
									400	9.66	34.73		26.818	123.9	.732
									500	8.26	34.64		26.972	109.3	.857
									600	7.02	34.58		27.106	96.6	.969

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

49

LATITUDE 11 54.3S			LONGITUDE 82 43.3W		MO/DAY/YR 11/29/65		MESSENGER TIME 1319		BOTTOM 4688M	WIND 140	SPEED 14KT	WEATHER 2	DOMINANT WAVES 160 08 08		
Z	T	S	C2	P04	S103	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD
									C	20.27	35.40		25.014	295.4	0
									10	20.27	35.40		25.014	295.4	.030
									20	20.28	35.41		25.019	294.9	.059
									30	20.17	35.41		25.048	292.1	.089
									50	19.45	35.35		25.191	278.5	.146
									75	16.92	35.12		25.643	235.5	.211
									100	14.47	34.91		26.036	198.2	.266
									125	13.34	34.89		26.257	177.1	.313
									150	12.47	34.86		26.408	162.8	.357
									200	11.72	34.87		26.560	148.4	.437
									250	11.12	34.84		26.648	140.0	.512
									300	10.42	34.78		26.727	132.6	.583
									400	9.11	34.70		26.886	117.5	.715
									500	7.80	34.61		27.018	105.0	.835
									600	6.83	34.57		27.125	94.9	.944

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

50

LATITUDE 11 54.0S			LONGITUDE 82 57.5W		MO/DAY/YR 11/29/65		MESSENGER TIME 1455		BOTTOM 4306M	WIND 140	SPEED 08KT	WEATHER 2	DOMINANT WAVES 160 08 08		
Z	T	S	C2	PC4	SIC3	N02	NC3	DT	Z	T	S	O2	SIGT	DT	CD
									C	20.17	35.40		25.040	292.8	0
									10	20.17	35.40		25.040	292.8	.029
									20	20.17	35.41		25.048	292.1	.059
									30	20.17	35.41		25.048	292.1	.088
									50	18.50	35.27		25.372	261.2	.144
									75	15.12	34.96		25.933	208.0	.203
									100	13.47	34.87		26.215	181.1	.252
									125	12.80	34.87		26.351	168.3	.296
									150	12.15	34.86		26.470	156.9	.338
									200	11.55	34.85		26.577	146.8	.416
									250	11.10	34.84		26.652	139.7	.490
									300	10.63	34.81		26.713	133.9	.562
									400	9.46	34.72		26.844	121.5	.697
									500	8.08	34.64		27.000	106.7	.820
									600	6.75	34.57		27.135	93.8	.929

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

51

	LATITUDE 11 52.75	LCNGITUDE 83 18.8h	PG/DAY/YR 11/29/65	MESSNGER 1727	TIME GMT	BOTTOM 4351M	WIND 140	SPEED 14KT	WEATHER 1	DOMINANT WAVES 160 07 08					
Z	T	S	C2	PC4	SIG3	NC2	NC3	DT	Z	T	S	O2	SIGT	DT	ED
									C	2C.42	35.42		24.989	297.7	0
									1C	2C.3C	35.42		25.021	294.7	.030
									2C	2C.3C	35.42		25.021	294.7	.059
									3C	2C.25	35.42		25.024	294.4	.089
									50	19.53	35.39		25.201	277.6	.146
									75	15.54	34.97		25.847	216.1	.208
									100	13.67	34.91		26.205	182.1	.259
									125	12.95	34.9C		26.344	168.9	.303
									150	12.50	34.90		26.433	160.4	.346
									20C	11.82	34.87		26.541	150.2	.425
									25C	11.31	34.85		26.621	142.6	.501
									30C	1C.73	34.81		26.695	135.6	.574
									40C	9.43	34.73		26.857	120.3	.710
									50C	8.17	34.65		26.994	107.3	.832
									60C	7.11	34.59		27.101	97.1	.944

BY ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

52

LATITUDE 12 00.05			LONGITUDE 83 41.0W			PG/DAY/YR 11/29/65			MESSENGER TIME 1958 GMT			BOTTOM 4965F		WIND 130		SPEED 08KT		WEATHER I		DOMINANT WAVES 160 08 09		
Z	T	S	C2	PD4	S103	NC2	NC3	CT	Z	T	S	O2	SIGT	DT	ED							
									C	20.26	35.42		25.032	293.7	0							
									10	20.16	35.41		25.045	292.4	.029							
									20	20.08	35.41		25.072	289.8	.058							
									30	19.20	35.34		25.248	273.1	.087							
									50	18.35	35.30		25.433	255.5	.140							
									75	17.68	35.26		25.568	242.7	.203							
									100	16.25	35.06		25.754	224.9	.262							
									125	13.75	34.91		26.180	184.5	.314							
									150	12.98	34.91		26.346	168.8	.359							
									200	11.78	34.86		26.541	150.2	.441							
									250	11.29	34.86		26.633	141.5	.517							
									300	10.87	34.83		26.686	136.5	.589							
									400	5.26	34.72		26.877	118.4	.724							
									500	7.75	34.63		27.041	102.8	.843							
									600	6.81	34.59		27.143	93.1	.950							

RV ALEXANDER AGASSIZ

MUCCAUBER EXPEDITION

53

Z	LATITUDE 12 02.05			LONGITUDE 83 57.2w			MC/DAY/YR 11/29/65			MESSENGER 2134			TIME GMT	BOTTOM 4198M	WIND 110	SPEED 14KT	WEATHER 1	DOMINANT WAVES 160 08 09		
	T	S	C2	P04	S103	N02	N03	CT	Z	T	S	O2						DT	ED	
														0	20.30	35.41		25.013	295.4	0
														10	20.28	35.41		25.019	294.9	.030
														20	20.10	35.41		25.067	290.3	.059
														30	20.08	35.41		25.072	289.8	.088
														50	19.03	35.34		25.292	268.9	.144
														75	17.98	35.27		25.502	248.9	.209
														100	15.30	34.93		25.870	213.9	.268
														125	13.67	34.93		26.220	180.7	.318
														150	12.79	34.86		26.345	168.8	.363
														200	12.02	34.89		26.519	152.3	.445
														250	11.38	34.86		26.616	143.1	.522
														300	10.83	34.84		26.701	135.1	.595
														400	9.35	34.74		26.878	118.3	.729
														500	7.95	34.65		27.027	104.1	.849
														600	6.83	34.60		27.148	92.6	.956

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

54

LATITUDE 12 05.55			LNGITUDE 84 21.2W		MO/DAY/YR 11/30/65		MESSENGER C016		TIME GMT		BOTTOM 4364M		WIND 120		SPEED 08KT		WEATHER 2		DOMINANT WAVES 160 08 09	
Z	T	S	C2	PG4	S103	NO2	NO3	CT	Z	T	S	O2	SIGT	DT	ED					
									0	20.28	35.39		25.004	296.3	0					
									10	20.27	35.39		25.006	296.1	.030					
									20	20.15	35.39		25.038	293.0	.059					
									30	20.02	35.38		25.065	290.5	.088					
									50	18.65	35.37		25.411	257.6	.144					
									75	17.53	35.20		25.558	243.5	.207					
									100	13.95	34.88		26.123	189.9	.262					
									125	13.07	34.91		26.328	170.5	.307					
									150	12.75	34.91		26.392	164.4	.350					
									200	11.83	34.88		26.547	149.6	.431					
									250	11.37	34.87		26.626	142.2	.507					
									300	10.75	34.84		26.715	133.7	.579					
									400	9.30	34.75		26.894	116.8	.712					
									500	7.94	34.67		27.044	102.5	.830					
									600	6.92	34.63		27.159	91.6	.936					

RV ALEXANDER AGASSIZ

MUCCAUBER EXPECTION

55

LATITUDE 12 07.05				LONGITUDE 84 32.8W		MO/DAY/YR 11/30/65		MESSENGER 0226		TIME GMT	BOTTOM 4445M	WIND 130	SPEED 14KT	WEATHER	DOMINANT WAVES 160 09		
Z	T	S	C2	PC4	SIO3	NC2	NC3	DT			Z	T	S	C2	SIGT	DT	CC
											0	20.08	35.40		25.064	290.6	0
											10	20.08	35.40		25.064	290.6	.029
											20	19.64	35.37		25.157	281.7	.058
											30	19.01	35.38		25.327	265.5	.085
											50	18.76	35.36		25.376	260.9	.138
											75	18.21	35.28		25.453	253.6	.203
											100	14.93	34.91		25.936	207.6	.261
											125	13.50	34.90		26.232	179.5	.311
											150	12.97	34.93		26.363	167.1	.355
											200	11.92	34.86		26.514	152.7	.437
											250	11.06	34.85		26.667	138.3	.512
											300	10.47	34.82		26.749	130.5	.583
											400	9.48	34.76		26.872	118.8	.715
											500	8.12	34.68		27.025	104.3	.835
											600	7.02	34.64		27.153	92.1	.943

RV ALEXANDER AGASSIZ

MUCCAUBER EXPECTION

H 4

LATITUDE 12 08.25				LONGITUDE 85 04.0W		MO/DAY/YR 11/30/65		MESSENGER 0500		TIME GMT	BOTTOM 4580M	WIND 140	SPEED 19KT	WEATHER	DOMINANT WAVES 160 06 07		
Z	T	S	C2	PC4	SIO3	NC2	NC3	DT			Z	T	S	C2	SIGT	DT	CC
1	20.18	35.418	5.50					291.8			0	20.18	35.418	5.50	25.051	291.8	0
10	20.19	35.413	5.51					292.4			10	20.19	35.413	5.51	25.045	292.4	.029
20	20.19	35.412	5.47					292.5			20	20.19	35.412	5.49	25.045	292.4	.059
56	19.39	35.347	5.14					277.2			30	20.16	35.405	5.47	25.051	291.8	.088
74	18.65	35.295	4.44					263.0			50	19.62	35.364	5.26	25.158	281.6	.145
89	17.06	35.151	3.33					236.4			75	18.57	35.288	4.39	25.369	261.5	.214
102	15.18	34.979	1.59					207.8			100	15.46	35.002	1.86	25.889	212.1	.274
129	13.20	34.908	.22					173.1			125	13.36	34.907	.28	26.266	176.3	.323
151	12.70	34.875	.32					166.0			150	12.71	34.876	.32	26.373	166.2	.367
178	11.93	34.844	.34					154.1			200	11.62	34.841	.41	26.556	148.8	.448
209	11.54	34.842	.44					147.3			250	11.17	34.826	.45	26.629	141.9	.523
271	11.00	34.815	.45					139.8			300	10.71	34.798	.40	26.690	136.1	.596
372	9.88	34.745	.33					126.3			400	9.50	34.718	.42	26.836	122.2	.733
470	8.54	34.654	.67					112.4			500	8.17	34.632	.65	26.979	108.7	.857
595	7.12	34.575	.60					98.3			600	7.07	34.574	.60	27.094	97.8	.969
740	5.81	34.532	.80					85.0			700	6.13	34.539	.73	27.193	88.3	1.072
896	5.02	34.546	.99					74.9			800	5.46	34.535	.85	27.274	80.7	1.166
1098	4.14	34.549	1.74					65.5			1000	4.55	34.548	1.31	27.390	69.7	1.337

RV ALEXANDER AGASSIZ

MUCCAUBER EXPECTION

56

LATITUDE 12 08.25				LONGITUDE 85 04.0W		MO/DAY/YR 11/30/65		MESSENGER 0550		TIME GMT	BOTTOM 4580M	WIND 140	SPEED 19KT	WEATHER	DOMINANT WAVES 160 06 07		
Z	T	S	C2	PC4	SIO3	NC2	NC3	DT			Z	T	S	C2	SIGT	DT	CC
											0	20.11	35.42		25.072	289.9	0
											10	20.12	35.42		25.069	290.1	.029
											20	20.12	35.42		25.069	290.1	.058
											30	20.08	35.41		25.072	289.8	.087
											50	19.35	35.37		25.222	275.6	.144
											75	17.65	35.23		25.552	244.1	.209
											100	14.50	34.84		25.976	203.9	.266
											125	13.45	34.97		26.297	173.4	.314
											150	12.55	34.89		26.408	162.9	.357
											200	11.71	34.88		26.570	147.5	.437
											250	11.12	34.86		26.664	138.6	.511
											300	10.64	34.84		26.735	131.8	.582
											400	9.35	34.73		26.870	119.0	.715
											500	8.06	34.68		27.034	103.5	.835
											600	6.94	34.62		27.149	92.6	.942

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

57

LATITUDE	LCNGITUDE	MO/DAY/YR	MESSENGER	TIME	BOTTOM	WIND	SPEED	WEATHER	Dominant WAVES						
11 36.8S	85 03.4W	11/30/65	C911	GMT	5023M	140	19KT		160 06 06						
Z	T	S	C2	PC4	S103	NC2	NC3	DT	Z	T	S	O2	SIGT	DT	CD
									C	20.12	35.41		25.061	290.8	0
									10	20.12	35.41		25.061	290.8	.029
									20	20.08	35.39		25.057	291.3	.058
									30	19.30	35.39		25.260	271.9	.087
									50	19.07	35.39		25.320	266.3	.141
									75	18.65	35.33		25.370	261.4	.207
									100	18.07	35.03		25.773	223.2	.268
									125	17.54	34.89		26.216	181.0	.320
									150	12.65	34.87		26.373	166.2	.364
									200	11.54	34.86		26.586	145.9	.444
									250	11.08	34.85		26.663	138.6	.518
									300	10.48	34.81		26.740	131.4	.589
									400	9.33	34.74		26.881	118.0	.721
									500	8.13	34.67		27.016	105.2	.841
									600	7.00	34.61		27.133	94.1	.950

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

58

LATITUDE	LCNGITUDE	MO/DAY/YR	MESSENGER	TIME	BOTTOM	WIND	SPEED	WEATHER	Dominant WAVES						
11 04.4S	85 03.4W	11/30/65	1218	GMT	4422M	110	08KT	2	110 08 06						
Z	T	S	O2	PC4	S103	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	CD
									C	20.44	35.39		24.961	300.4	0
									10	20.45	35.39		24.958	300.7	.030
									20	20.45	35.39		24.958	300.7	.060
									30	20.03	35.40		25.077	289.3	.090
									50	19.83	35.41		25.138	283.6	.147
									75	18.56	35.26		25.345	263.9	.216
									100	14.67	34.93		26.008	200.8	.275
									125	13.12	34.88		26.294	173.6	.323
									150	12.78	34.82		26.393	164.2	.366
									200	11.90	34.90		26.549	149.4	.447
									250	11.37	34.87		26.626	142.2	.522
									300	10.92	34.84		26.685	136.6	.595
									400	9.68	34.76		26.838	122.0	.732
									500	8.25	34.67		26.997	106.9	.855
									600	7.12	34.63		27.132	94.2	.965

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

59

LATITUDE	LCNGITUDE	MO/DAY/YR	MESSENGER	TIME	BOTTOM	WIND	SPEED	WEATHER	Dominant WAVES						
10 32.1S	85 03.4W	11/30/65	1545	GMT	4507M	130	08KT	1	140 06 05						
Z	T	S	O2	PC4	S103	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	CD
									C	20.56	35.37		24.913	304.9	0
									10	20.54	35.37		24.919	304.4	.030
									20	20.43	35.36		24.941	302.3	.061
									30	19.96	35.34		25.050	291.9	.091
									50	19.85	35.36		25.094	287.7	.149
									75	16.50	35.09		25.719	228.3	.214
									100	14.71	35.01		26.061	195.8	.268
									125	13.35	34.97		26.317	171.5	.314
									150	12.93	34.95		26.387	164.9	.357
									200	12.35	34.92		26.470	156.9	.440
									250	11.98	34.90		26.534	150.9	.520
									300	11.26	34.85		26.630	141.7	.596
									400	9.87	34.76		26.806	125.0	.738
									500	8.14	34.65		26.998	106.8	.862
									600	7.10	34.62		27.126	94.7	.972

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

60

LATITUDE	LCNGITUDE	MO/DAY/YR	MESSENGER	TIME	BOTTOM	WIND	SPEED	WEATHER	Dominant WAVES						
10 00.2S	85 03.4W	11/30/65	1855	GMT	4391M	140	10KT	1	140 06 05						
Z	T	S	O2	PC4	S103	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	CD
									C	21.28	35.24		24.619	332.9	0
									10	21.04	35.25		24.692	325.9	.033
									20	21.00	35.25		24.703	324.9	.066
									30	20.28	35.26		24.905	305.7	.097
									50	19.75	35.30		25.075	289.5	.157
									75	17.00	35.06		25.579	241.6	.224
									100	14.18	34.97		26.144	187.9	.278
									125	13.35	34.95		26.302	172.9	.324
									150	12.93	34.94		26.379	165.6	.367
									200	12.32	34.91		26.476	156.4	.450
									250	11.75	34.88		26.555	148.9	.529
									300	11.22	34.84		26.630	141.8	.605
									400	9.93	34.75		26.788	126.8	.748
									500	8.25	34.66		26.983	108.3	.874
									600	7.05	34.60		27.118	95.5	.985

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

61

LATITUDE 9 33.0S			LONGITUDE 85 00.0W			MO/DAY/YR 11/30/65			MESSENGER 2203		TIME GMT		BOTTOM 5155M		WIND 140		SPEED 14KT		WEATHER 1		DOMINANT WAVES 140 05 07		
Z	T	S	C2	P04	S103	N02	N03	DT					Z	T	S			O2	SIGT	DT	CD		
													C	21.84	35.29			24.502	344.1		0		
													10	21.68	35.29			24.547	339.8		.034		
													20	21.50	35.28			24.589	335.8		.068		
													30	20.75	35.32			24.824	313.4		.101		
													50	18.50	35.17			25.296	268.5		.159		
													75	15.85	35.06			25.846	216.2		.220		
													100	14.38	34.99			26.117	190.5		.272		
													125	13.54	34.95			26.263	176.6		.318		
													150	13.01	34.93			26.355	167.9		.362		
													200	12.38	34.91			26.464	157.5		.446		
													250	11.76	34.87			26.553	149.1		.525		
													300	11.20	34.83			26.626	142.2		.602		
													400	9.78	34.73			26.798	125.8		.743		
													500	8.13	34.62			26.976	108.9		.870		
													600	7.02	34.58			27.106	96.6		.982		

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

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LATITUDE 9 00.0S			LONGITUDE 85 00.0W			MO/DAY/YR 12/01/65			MESSENGER 0135		TIME GMT	BOTTOM 5038M	WIND 150	SPEED 12KT	WEATHER 1	DOMINANT WAVES 140 05 07		
Z	T	S	C2	P04	S103	N02	N03	CT	Z	T	S	O2	SIGT	DT	CD			
									C	22.12	35.32			24.447	349.4	0		
									10	22.03	35.32			24.472	347.0	.035		
									20	21.91	35.32			24.506	343.8	.069		
									30	21.67	35.30			24.557	338.8	.104		
									50	18.05	35.14			25.385	260.0	.164		
									75	14.35	34.99			26.123	189.9	.221		
									100	13.71	34.97			26.243	178.5	.267		
									125	13.14	34.94			26.337	169.6	.311		
									150	12.77	34.93			26.403	163.3	.354		
									200	12.37	34.91			26.466	157.3	.436		
									250	11.80	34.88			26.553	149.1	.516		
									300	11.28	34.85			26.627	142.1	.592		
									400	9.80	34.73			26.795	126.1	.734		
									500	8.22	34.63			26.971	109.5	.861		
									600	6.91	34.58			27.121	95.2	.972		

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

63

LATITUDE 8 32.6S			LONGITUDE 85 00.0W			MO/DAY/YR 12/01/65			MESSENGER 0454		TIME GMT		BOTTOM 4410M		WIND 120		SPEED 08KT		WEATHER 1		DOMINANT WAVES		
Z	T	S	C2	PC4	S103	N02	N03	DT					Z	T	S			O2	SIGT	DT	CD		
													C	21.93	35.33			24.508	343.6		0		
													10	21.85	35.30			24.507	343.6		.034		
													20	21.68	35.31			24.562	338.4		.069		
													30	21.03	35.33			24.756	319.9		.102		
													50	18.75	35.23			25.279	270.1		.161		
													75	14.65	35.00			26.066	195.3		.219		
													100	13.42	34.95			26.287	174.3		.266		
													125	12.86	34.95			26.401	163.5		.309		
													150	12.62	34.94			26.441	159.7		.351		
													200	12.11	34.91			26.517	152.5		.431		
													250	11.75	34.88			26.555	148.9		.509		
													300	10.93	34.82			26.667	138.2		.584		
													400	9.28	34.71			26.866	119.4		.721		
													500	7.93	34.63			27.014	105.3		.841		
													600	6.87	34.58			27.127	94.6		.951		

RV ALEXANDER AGASSIZ					MUCCAUBER EXPEDITION										H 5	
LATITUDE 8 04.8S			LONGITUDE 85 00.0W		MO/DAY/YR 12/01/65		MESSENGER 0830		TIME GMT	BOTTOM 4275M	WIND 110	SPEED 14KT	WEATHER 1	DOMINANT WAVES 160 04 04		
Z	T	S	C2	PC4	S103	NC2	NC3	CT	Z	T	S	O2	SIGT	DT	CC	
1	22.10	35.298	5.30					350.4	0	22.10	35.298	5.30	24.436	350.4	0	
10	22.11	35.298	5.32					350.7	10	22.11	35.298	5.32	24.433	350.7	.035	
30	22.02	35.299	5.29					348.2	20	22.06	35.298	5.30	24.446	349.4	.070	
59	18.02	35.216	2.54					253.8	30	22.02	35.299	5.29	24.459	348.2	.105	
79	15.41	35.033	.76					208.7	50	19.49	35.247	3.55	25.102	287.0	.169	
93	14.18	34.994	.64					186.1	75	15.85	35.067	1.04	25.843	216.5	.232	
107	13.60	34.976	.64					175.9	100	13.83	34.984	.64	26.228	179.9	.283	
136	13.20	34.951	.43					170.0	125	13.27	34.953	.51	26.320	171.2	.327	
160	13.04	34.941	.41					167.6	150	13.11	34.946	.42	26.347	168.7	.371	
189	12.70	34.922	.34					162.6	200	12.61	34.916	.35	26.425	161.2	.455	
223	12.42	34.906	.39					158.5	250	12.13	34.889	.47	26.497	154.4	.537	
290	11.66	34.864	.56					147.8	300	11.56	34.858	.54	26.582	146.4	.616	
357	10.40	34.789	.25					131.6	400	10.34	34.785	.25	26.744	131.0	.763	
504	8.38	34.656	.22					109.9	500	8.46	34.661	.22	26.958	110.7	.893	
643	6.54	34.578	.33					90.6	600	7.02	34.595	.30	27.117	95.6	1.005	
801	5.36	34.552	1.08					78.3	700	6.03	34.564	.59	27.225	85.3	1.105	
969	4.56	34.557	1.29					69.2	800	5.37	34.552	1.08	27.299	78.4	1.197	
1178	3.82	34.575	1.67					60.4	1000	4.43	34.559	1.34	27.411	67.7	1.363	

RV ALEXANDER AGASSIZ										MUCCAUBER EXPEDITION										64	
LATITUDE 8 04.8S			LONGITUDE 85 00.0W			MO/DAY/YR 12/01/65		MESSENGER 0918		TIME GMT	BOTTOM 4275M	WIND 110	SPEED 14KT	WEATHER 1	DOMINANT WAVES 160 04 04						
Z	T	S	C2	PC4	S103	NC2	NC3	CT	Z	T	S	O2	SIGT	DT	CD						
									0	22.10	35.33		24.460	348.1	0						
									10	22.10	35.33		24.460	348.1	.035						
									20	22.08	35.33		24.466	347.6	.070						
									30	21.28	35.29		24.657	329.3	.104						
									50	17.82	35.20		25.488	250.3	.162						
									75	14.90	35.00		26.012	200.4	.219						
									100	13.67	34.98		26.259	177.0	.266						
									125	13.27	34.97		26.333	169.9	.311						
									150	13.05	34.95		26.363	167.2	.354						
									200	12.61	34.94		26.443	159.6	.438						
									250	12.14	34.91		26.511	153.1	.519						
									300	11.63	34.88		26.585	146.1	.597						
									400	10.41	34.79		26.736	131.7	.744						
									500	8.60	34.66		26.935	112.8	.875						
									600	7.00	34.60		27.125	94.9	.989						

RV ALEXANDER AGASSIZ						MUCCAUBER EXPEDITION										65	
LATITUDE 7 32.0S		LONGITUDE 84 59.2W		MO/DAY/YR 12/01/65		MESSENGER 1300		TIME GMT	BOTTOM 4352M	WIND 130	SPEED 15KT	WEATHER 1	DOMINANT WAVES 160 06 07				
Z	T	S	C2	PC4	S103	NC2	NC3	DT	Z	T	S	O2	SIGT	DT	CD		
									0	22.09	35.31		24.448	349.3	0		
									10	22.09	35.31		24.448	349.3	.035		
									20	22.09	35.31		24.448	349.3	.070		
									30	22.09	35.32		24.455	348.6	.105		
									50	20.25	35.21		24.875	308.6	.171		
									75	14.82	35.00		26.030	198.8	.235		
									100	13.88	34.99		26.223	180.4	.283		
									125	13.44	34.97		26.299	173.2	.328		
									150	13.12	34.96		26.356	167.8	.371		
									200	12.77	34.94		26.411	162.6	.456		
									250	12.36	34.92		26.476	156.4	.539		
									300	12.00	34.90		26.530	151.2	.619		
									400	10.57	34.79		26.708	134.3	.771		
									500	8.64	34.67		26.937	112.7	.903		
									600	7.40	34.61		27.076	99.5	1.019		

RV ALEXANDER AGASSIZ

MUCCAUBER EXPEDITION

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LATITUDE 7 03.6S			LONGITUDE 84 58.1W		MO/DAY/YR 12/01/65	MESSENGER 1602		TIME GMT	BOTTOM 4198M	WIND 150	SPEED 15KT	WEATHER 0	DOMINANT WAVES 160 07 07		
Z	T	S	02	P04	S103	NC2	NC3	DT	Z	T	S	02	SIGT	DT	CD
									C	22.33	35.31		24.380	355.7	0
									1C	22.31	35.31		24.386	355.2	.036
									2C	22.27	35.32		24.404	353.4	.071
									30	22.24	35.32		24.413	352.6	.106
									5C	17.10	35.06		25.555	243.9	.166
									75	15.17	35.05		25.991	202.4	.223
									100	14.78	35.04		26.069	195.0	.273
									125	13.97	34.99		26.204	182.2	.321
									150	13.63	34.98		26.267	176.2	.367
									200	13.17	34.95		26.338	169.5	.456
									250	12.73	34.93		26.411	162.5	.542
									300	12.35	34.91		26.470	156.9	.625
									400	11.00	34.81		26.647	140.2	.782
									500	8.81	34.67		26.910	115.2	.919
									600	7.40	34.62		27.084	98.7	1.036

RV ALEXANDER AGASSIZ

MUCCAUBER EXPEDITION

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LATITUDE 6 27.8S			LONGITUDE 84 58.2W		MO/DAY/YR 12/01/65	MESSENGER 1944		TIME GMT	BOTTOM 4813M	WIND 140	SPEED 17KT	WEATHER 1	DOMINANT WAVES 160 06 07		
Z	T	S	02	P04	S103	NO2	NO3	DT	Z	T	S	02	SIGT	DT	CD
									C	22.57	35.12		24.168	375.9	0
									10	22.53	35.13		24.187	374.1	.038
									20	22.42	35.13		24.218	371.2	.075
									30	21.90	35.23		24.440	350.0	.111
									50	18.63	35.17		25.263	271.6	.173
									75	15.60	35.02		25.872	213.7	.235
									100	14.45	35.00		26.110	191.2	.286
									125	13.93	34.99		26.212	181.4	.333
									150	13.68	34.98		26.257	177.2	.379
									200	13.22	34.95		26.328	170.4	.468
									250	12.67	34.92		26.415	162.2	.554
									300	12.17	34.89		26.490	155.1	.637
									400	10.75	34.78		26.668	138.1	.792
									500	8.76	34.68		26.926	113.7	.928
									600	7.27	34.59		27.079	99.2	1.044

RV ALEXANDER AGASSIZ

MUCCAUBER EXPEDITION

68

LATITUDE 5 56.0S			LONGITUDE 84 59.1W		MO/DAY/YR 12/01/65	MESSENGER 2253		TIME GMT	BOTTOM 4002M	WIND 150	SPEED 17KT	WEATHER 2	DOMINANT WAVES 160 07 07		
Z	T	S	02	P04	S103	NO2	NO3	DT	Z	T	S	02	SIGT	DT	CD
									C	22.20	34.94		24.136	379.0	0
									10	22.21	34.95		24.141	378.5	.038
									20	22.21	34.95		24.141	378.5	.076
									30	22.14	34.95		24.161	376.6	.114
									50	21.89	35.28		24.481	346.1	.186
									75	18.12	35.13		25.360	262.4	.263
									100	15.30	35.01		25.931	208.1	.322
									125	14.12	35.00		26.180	184.5	.372
									150	13.62	34.98		26.269	176.0	.418
									200	13.25	34.97		26.329	170.3	.507
									250	12.89	34.94		26.387	164.8	.594
									300	12.31	34.91		26.478	156.2	.678
									400	10.49	34.77		26.707	134.5	.832
									500	8.11	34.62		26.979	108.6	.962
									600	7.18	34.60		27.099	97.2	1.074

RV ALEXANDER AGASSIZ

MUCCAUBER EXPEDITION

69

LATITUDE 5 35.0S			LONGITUDE 84 59.9W		MO/DAY/YR 12/02/65	MESSENGER 0127		TIME GMT	BOTTOM 3984M	WIND 160	SPEED 19KT	WEATHER 2	DOMINANT WAVES		
Z	T	S	02	P04	S103	NC2	NC3	DT	Z	T	S	02	SIGT	DT	CD
									C	22.09	35.07		24.266	366.6	0
									10	22.09	35.07		24.266	366.6	.037
									20	22.09	35.08		24.273	365.9	.073
									30	22.06	35.09		24.289	364.4	.110
									50	21.20	35.00		24.459	348.2	.182
									75	18.70	35.04		25.147	282.7	.261
									100	14.88	34.99		26.009	200.8	.322
									125	13.93	34.99		26.212	181.4	.371
									150	13.62	34.98		26.269	176.0	.416
									200	13.27	34.97		26.333	169.9	.505
									250	12.79	34.94		26.407	162.9	.591
									300	12.13	34.90		26.505	153.6	.674
									400	10.77	34.79		26.673	137.7	.828
									500	8.18	34.63		26.977	108.9	.961
									600	7.08	34.61		27.121	95.2	1.072

RV ALEXANDER AGASSIZ						MUDDAUBER EXPEDITION										70	
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES	
4 53.1S		85 00.0W		12/02/65		0530		4009M		150		14KT		1			
Z	T	S	C2	PC4	SIG3	NO2	NC3	DT	Z	T	S	O2	SIGT	DT	CC		
									C	22.17	35.08		24.251	368.0	0		
									1C	22.17	35.08		24.251	368.0	.037		
									2C	22.13	35.08		24.262	367.0	.074		
									3C	21.58	35.12		24.446	349.5	.110		
									5C	21.27	35.09		24.508	343.5	.179		
									7S	20.71	35.05		24.630	331.9	.264		
									10C	16.00	35.05		25.804	220.2	.334		
									12S	14.58	35.02		26.097	192.4	.386		
									15C	14.02	35.00		26.201	182.5	.434		
									20C	13.30	34.96		26.320	171.2	.525		
									25C	12.74	34.93		26.409	162.7	.612		
									30C	12.12	34.90		26.507	153.4	.694		
									40C	10.08	34.75		26.763	129.2	.844		
									50C	8.31	34.66		26.980	108.5	.971		
									60C	7.25	34.60		27.090	98.2	1.084		

RV ALEXANDER AGASSIZ					MUDDAUBER EXPEDITION										71		
LATITUDE 4 22.0S		LONGITUDE 85 01.0W		MO/DAY/YR 12/02/65		MESSENGER TIME 0902		BOTTOM 3470M		WIND 170		SPEED 15KT		WEATHER 2		DOMINANT WAVES	
Z	T	S	C2	PC4	SIG3	NO2	NC3	DT	Z	T	S	O2	SIGT	DT	CC		
									C	21.70	35.05		24.359	357.7	0		
									1C	21.70	35.05		24.359	357.7	.036		
									2C	21.65	35.07		24.388	354.9	.071		
									3C	21.22	35.09		24.522	342.2	.106		
									50	20.50	35.09		24.717	323.6	.173		
									75	19.63	35.11		24.962	300.3	.252		
									100	17.28	35.16		25.588	240.7	.320		
									125	14.47	35.04		26.136	188.6	.375		
									150	13.75	34.99		26.250	177.8	.422		
									200	13.15	34.96		26.350	168.3	.511		
									250	12.76	34.94		26.413	162.4	.596		
									300	12.28	34.90		26.476	156.4	.679		
									400	10.53	34.79		26.715	133.7	.833		
									500	8.62	34.68		26.948	111.6	.965		
									600	7.48	34.62		27.072	99.8	1.080		

RV ALEXANDER AGASSIZ										MUDDAUBER EXPEDITION										72
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES				
3 53.0S		85 01.4W		12/02/65		1144		3423M		180		16KT		1		160 07 08				
Z	T	S	C2	PC4	SIG3	NO2	NO3	DT	Z	T	S	O2	SIGT	DT	CD					
									0	21.54	35.18		24.502	344.1	0					
									1C	21.54	35.19		24.510	343.4	.034					
									20	21.54	35.18		24.502	344.1	.069					
									3C	21.45	35.18		24.527	341.7	.103					
									5C	20.82	35.10		24.638	331.1	.171					
									7S	19.03	35.10		25.109	286.3	.249					
									10C	15.80	35.07		25.865	214.4	.312					
									12S	14.18	35.01		26.175	185.0	.363					
									15C	13.67	34.98		26.259	177.0	.409					
									20C	12.97	34.95		26.379	165.6	.497					
									25C	12.49	34.91		26.443	159.5	.581					
									30C	11.64	34.86		26.567	147.7	.661					
									40C	9.80	34.75		26.810	124.7	.805					
									50C	8.25	34.66		26.989	107.7	.930					
									60C	7.08	34.61		27.121	95.2	1.041					

RV ALEXANDER AGASSIZ										MUDDAUBER EXPEDITION										73
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES				
3 37.0S		85 02.3W		12/02/65		1428		3357M		160		08KT		1		160 07 08				
Z	T	S	C2	PC4	SIG3	NO2	NC3	DT	Z	T	S	O2	SIGT	DT	CC					
									C	21.32	35.09		24.494	344.8	0					
									1C	21.28	35.09		24.505	343.8	.034					
									2C	21.25	35.09		24.514	343.0	.069					
									3C	21.08	35.08		24.552	339.3	.103					
									5C	19.14	35.09		25.073	289.7	.166					
									7S	18.13	35.08		25.320	266.3	.236					
									10C	16.78	35.13		25.684	231.6	.299					
									12S	15.03	35.07		26.037	198.0	.354					
									15C	14.24	35.01		26.162	186.2	.403					
									20C	13.02	34.95		26.369	166.6	.493					
									25C	12.47	34.91		26.447	159.1	.578					
									30C	11.03	34.82		26.649	140.0	.656					
									40C	9.50	34.71		26.829	122.9	.795					
									50C	8.33	34.66		26.977	108.8	.920					
									60C	7.03	34.60		27.121	95.3	1.031					

RV ALEXANDER AGASSIZ

MUCCAUBER EXPEDITION

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LATITUDE			LONGITUDE			MO/DAY/YR		MESSENGER TIME		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES	
2 52.9S			85 03.8W			12/02/65		1729		3227M		150		09KT		1		160 07 08	
Z	T	S	C2	PC4	SIO3	NC2	NC3	DT	Z	T	S	C2	SIGT	DT	CC				
									0	21.67	35.06		24.375	356.2		0			
									10	21.45	35.06		24.436	350.4		.035			
									20	20.88	35.05		24.584	336.3		.070			
									30	19.73	35.03		24.875	308.6		.102			
									50	18.42	35.11		25.270	270.9		.160			
									75	17.57	35.12		25.488	250.3		.226			
									100	16.98	35.10		25.614	238.3		.288			
									125	16.03	35.06		25.805	220.1		.346			
									150	14.50	35.03		26.122	190.0		.398			
									200	13.39	34.94		26.286	174.4		.492			
									250	12.62	34.91		26.417	161.9		.579			
									300	11.47	34.79		26.545	149.9		.660			
									400	9.52	34.71		26.826	123.2		.805			
									500	8.27	34.64		26.971	109.5		.930			
									600	7.51	34.60		27.052	101.7		1.045			

RV ALEXANDER AGASSIZ

MUCCAUBER EXPEDITION

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LATITUDE			LONGITUDE			MO/DAY/YR		MESSENGER TIME		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES	
2 28.2S			85 03.8W			12/02/65		2049		2779M		170		09KT		1		160 06 08	
Z	T	S	C2	PC4	SIO3	NC2	NC3	DT	Z	T	S	C2	SIGT	DT	CC				
									C	21.98	35.08		24.304	363.0	0				
									10	21.82	35.08		24.349	358.7	.036				
									20	21.54	35.09		24.434	350.6	.072				
									30	20.10	35.02		24.770	318.6	.105				
									50	18.63	35.10		25.210	276.7	.165				
									75	17.72	35.10		25.436	255.2	.232				
									100	16.37	35.07		25.734	226.8	.293				
									125	15.86	35.06		25.844	216.4	.349				
									150	15.29	35.08		25.988	202.8	.403				
									200	13.97	34.97		26.189	183.7	.502				
									250	13.27	34.93		26.302	172.9	.594				
									300	12.17	34.87		26.474	156.6	.680				
									400	9.63	34.70		26.800	125.6	.829				
									500	8.35	34.64		26.958	110.6	.956				
									600	7.47	34.39		27.050	101.9	1.072				

RV ALEXANDER AGASSIZ

MUCCAUBER EXPEDITION

M 6

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
1 58.0S		85 02.2W		12/03/65		0005		GMT	2522M	170	14KT	1	150 05 05		
Z	T	S	C2	PC4	SIO3	NC2	NC3	DT	Z	T	S	C2	SIGT	DT	DD
1	21.96	35.106	5.34					360.5	0	21.96	35.106	5.34	24.329	360.5	0
10	21.94	35.102	5.38					360.3	10	21.94	35.102	5.38	24.332	360.3	.036
30	21.39	35.099	5.16					346.0	20	21.67	35.100	5.27	24.406	353.3	.072
59	17.92	35.118	3.01					258.6	30	21.39	35.099	5.16	24.482	346.0	.107
79	16.94	35.095	2.57					237.7	50	19.08	35.102	3.73	25.098	287.4	.170
94	16.10	35.104	2.50					218.4	75	17.10	35.101	2.61	25.587	240.8	.237
108	15.78	35.094	2.53					212.2	100	15.93	35.101	2.51	25.859	214.9	.295
138	15.42	35.080	2.54					205.5	125	15.57	35.089	2.54	25.932	208.0	.348
163	14.88	35.028	2.37					198.0	150	15.15	35.055	2.46	25.999	201.7	.401
192	14.70	35.014	2.42					195.3	200	14.50	35.005	2.21	26.103	191.8	.502
227	13.70	34.973	1.35					178.1	250	13.22	34.950	.92	26.328	170.4	.595
296	12.35	34.897	.46					157.9	300	12.25	34.889	.46	26.475	156.5	.681
404	9.72	34.739	.49					124.2	400	9.81	34.744	.49	26.803	125.3	.830
513	8.25	34.662	.62					107.5	500	8.38	34.670	.60	26.976	108.9	.956
651	6.90	34.604	.72					93.2	600	7.37	34.623	.66	27.090	98.1	1.069
809	5.36	34.579	1.41					76.3	700	6.38	34.592	.92	27.201	87.6	1.172
977	4.51	34.576	1.80					67.2	800	5.44	34.580	1.37	27.312	77.1	1.264
1187	3.76	34.596	1.88					58.2	1000	4.41	34.578	1.81	27.428	66.1	1.427

RV ALEXANDER AGASSIZ										MUDDAUBER EXPEDITION				76			
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
1 58.05		85 02.2W		12/03/65		C051		GMT		2522M	170	14KT	1	150 05 05			
Z	T	S	O2	PO4	SIO3	NO2	NC3	DT	Z	T	S	O2	SIGT	DT	CG		
									C	21.85	35.10		24.355	358.1	0		
									1C	21.83	35.10		24.361	357.5	.036		
									2C	21.68	35.10		24.403	353.6	.071		
									30	21.22	35.10		24.529	341.5	.106		
									50	18.81	35.13		25.187	278.8	.169		
									75	17.24	35.11		25.560	243.4	.234		
									100	15.92	35.09		25.853	215.5	.292		
									125	15.63	35.10		25.927	208.5	.346		
									150	14.93	35.04		26.036	198.1	.398		
									200	14.65	35.01		26.074	194.5	.499		
									250	13.42	34.95		26.287	174.3	.594		
									300	12.54	34.91		26.433	160.5	.682		
									400	9.68	34.73		26.815	124.2	.832		
									500	8.34	34.65		26.968	109.7	.958		
									600	7.53	34.61		27.057	101.2	1.073		

RV ALEXANDER AGASSIZ										MUDDAUBER EXPEDITION				77			
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
1 27.85		85 02.9W		12/03/65		0410		GMT		2219M	160	15KT	1				
Z	T	S	O2	PO4	SIO3	NO2	NC3	DT	Z	T	S	O2	SIGT	DT	CG		
									C	21.93	35.14		24.363	357.3	0		
									1C	21.93	35.14		24.363	357.3	.036		
									2C	21.92	35.15		24.374	356.3	.071		
									30	21.10	35.09		24.555	339.1	.106		
									50	15.62	35.11		24.964	300.1	.171		
									75	17.04	35.14		25.630	236.7	.238		
									100	16.06	35.11		25.837	217.1	.296		
									125	15.37	35.08		25.970	204.5	.349		
									150	14.95	35.01		26.009	200.7	.401		
									200	14.36	35.01		26.132	189.0	.501		
									250	13.48	34.98		26.298	173.3	.595		
									300	12.56	34.93		26.445	159.4	.681		
									400	9.65	34.73		26.813	124.4	.831		
									500	8.15	34.66		27.005	106.2	.955		
									600	7.38	34.62		27.087	98.4	1.067		

RV ALEXANDER AGASSIZ										MUDDAUBER EXPEDITION				78			
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
0 57.05		85 01.2W		12/03/65		C7C2		GMT		2182M	170	17KT	1				
Z	T	S	O2	PO4	SIO3	NO2	NC3	DT	Z	T	S	O2	SIGT	DT	CG		
									C	22.37	34.32		23.619	428.3	0		
									10	22.37	34.33		23.626	427.6	.043		
									20	22.35	34.34		23.639	426.3	.086		
									30	22.24	34.47		23.769	414.0	.128		
									50	20.49	34.94		24.605	334.3	.203		
									75	17.55	35.07		25.454	253.5	.277		
									100	15.99	35.10		25.845	216.3	.336		
									125	15.60	35.10		25.933	207.9	.390		
									150	15.33	35.08		25.979	203.6	.443		
									200	14.18	34.98		26.152	187.2	.543		
									250	13.03	34.93		26.351	168.2	.635		
									300	11.65	34.85		26.558	148.6	.718		
									400	9.25	34.72		26.878	118.2	.859		
									500	7.82	34.64		27.038	103.0	.978		
									600	7.07	34.63		27.139	93.5	1.085		

RV ALEXANDER AGASSIZ										MUDDAUBER EXPEDITION				79			
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
0 26.35		85 00.9W		12/03/65		1020		GMT		2380M	170	19KT	1	160 05 04			
Z	T	S	O2	PO4	SIO3	NO2	NC3	DT	Z	T	S	O2	SIGT	DT	CG		
									C	24.40	33.43		22.358	548.8	0		
									1C	24.40	33.43		22.358	548.8	.055		
									20	24.41	33.43		22.355	549.0	.110		
									30	22.50	33.56		23.007	486.8	.162		
									50	20.33	34.93		24.640	330.9	.244		
									75	17.72	35.11		25.443	254.5	.317		
									100	17.25	35.12		25.565	242.9	.380		
									125	15.93	35.09		25.851	215.7	.439		
									150	15.38	35.04		25.937	207.6	.493		
									200	13.98	34.99		26.202	182.4	.593		
									250	12.85	34.93		26.387	164.8	.683		
									300	11.82	34.87		26.541	150.2	.765		
									400	9.24	34.71		26.872	118.8	.907		
									500	7.84	34.64		27.035	103.3	1.027		
									600	7.07	34.61		27.123	95.0	1.135		

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

80

LATITUDE 0 03.0N			LONGITUDE 84 59.9W			MO/DAY/YR 12/03/65			MESSENGER TIME 1311			BOTTOM 3323M	WIND 180	SPEED 18KT	WEATHER 2	DOMINANT WAVES 170 09 09		
Z	T	S	C2	PC4	SI03	NO2	NC3	DT	Z	T	S	O2	SIGT	DT	CC			
									C	25.29	32.94		21.722	609.7	0			
									1C	25.29	32.94		21.722	609.7	.061			
									2C	23.25	33.46		22.717	514.4	.117			
									3C	20.95	34.45		24.109	381.5	.162			
									50	19.70	34.84		24.738	321.6	.233			
									75	18.04	35.08		25.342	264.1	.306			
									100	17.05	35.10		25.597	239.9	.370			
									125	15.82	35.07		25.861	214.8	.428			
									150	15.56	35.09		25.930	208.2	.482			
									200	13.90	34.59		26.219	180.8	.582			
									250	12.76	34.93		26.405	163.1	.671			
									300	11.90	34.87		26.526	151.6	.753			
									400	9.31	34.72		26.869	119.1	.896			
									500	8.12	34.66		27.009	105.8	1.017			
									600	7.35	34.62		27.091	98.0	1.129			

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

81

LATITUDE 0 04.0N			LONGITUDE 85 19.4W			MO/DAY/YR 12/03/65			MESSENGER TIME 1537			BOTTOM 3361M	WIND 190	SPEED 14KT	WEATHER 2	DOMINANT WAVES 180 06 05		
Z	T	S	C2	PC4	SI03	NO2	NC3	DT	Z	T	S	O2	SIGT	DT	CC			
									C	25.12	33.17		21.947	588.2	0			
									1C	25.12	33.17		21.947	588.2	.059			
									2C	24.80	33.25		22.103	573.2	.117			
									3C	20.59	34.57		24.297	363.6	.164			
									50	19.65	34.66		24.614	333.5	.234			
									75	17.70	35.03		25.387	259.8	.309			
									100	16.95	35.13		25.644	235.4	.371			
									125	15.72	35.09		25.899	211.2	.428			
									150	15.31	35.06		25.968	204.7	.481			
									200	14.17	35.00		26.169	185.5	.581			
									250	13.02	34.93		26.353	168.0	.673			
									300	11.89	34.87		26.528	151.5	.756			
									400	9.37	34.71		26.851	120.8	.900			
									500	8.00	34.65		27.019	104.8	1.021			
									600	7.19	34.61		27.106	96.6	1.131			

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

82

LATITUDE 0 07.0N			LONGITUDE 85 38.8W			MO/DAY/YR 12/03/65			MESSENGER TIME 1748			BOTTOM 3135M	WIND 190	SPEED 19KT	WEATHER 1	DOMINANT WAVES 180 07 06		
Z	T	S	C2	PC4	SI03	NO2	NC3	DT	Z	T	S	O2	SIGT	DT	CC			
									C	24.92	33.22		22.045	578.8	0			
									1C	24.90	33.22		22.051	578.2	.058			
									20	24.82	33.24		22.090	574.5	.116			
									3C	20.95	34.60		24.223	370.7	.163			
									50	19.85	34.96		24.790	316.7	.232			
									75	17.85	35.05		25.366	261.9	.305			
									100	17.08	35.09		25.582	241.3	.368			
									125	15.70	35.11		25.919	209.3	.426			
									150	15.12	35.05		26.002	201.4	.478			
									200	14.03	34.99		26.191	183.4	.577			
									250	12.84	34.92		26.381	165.4	.667			
									300	11.75	34.86		26.547	149.7	.749			
									400	9.36	34.72		26.860	119.9	.892			
									500	7.91	34.64		27.025	104.3	1.012			
									600	7.21	34.61		27.103	96.9	1.122			

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

83

LATITUDE 0 01.0N			LONGITUDE 85 58.6W			MO/DAY/YR 12/03/65			MESSENGER TIME 2033			BOTTOM 2832M	WIND 180	SPEED 16KT	WEATHER 1	DOMINANT WAVES 180 07 06		
Z	T	S	C2	PC4	SI03	NO2	NC3	DT	Z	T	S	O2	SIGT	DT	CC			
									C	24.64	33.53		22.362	548.4	0			
									1C	24.59	33.53		22.377	547.0	.055			
									2C	24.40	33.54		22.441	540.8	.109			
									3C	22.90	33.80		23.075	480.3	.160			
									50	20.80	34.86		24.461	348.0	.243			
									75	17.76	35.05		25.388	259.8	.320			
									100	16.97	35.06		25.586	241.0	.383			
									125	16.24	35.09		25.780	222.5	.442			
									150	15.60	35.07		25.910	210.1	.497			
									200	14.60	35.02		26.093	192.8	.601			
									250	12.98	34.92		26.353	168.0	.694			
									300	11.96	34.86		26.507	153.5	.778			
									400	9.48	34.72		26.841	121.8	.923			
									500	7.83	34.64		27.037	103.2	1.044			
									600	7.10	34.61		27.119	95.4	1.153			

RV ALEXANDER AGASSIZ

MUCCAUBER EXPEDITION

84

LATITUDE 0 02.0N			LONGITUDE 86 22.0W		PC/DAY/YR 12/03/65		MESSENGER TIME 2318		BOTTOM 3003M	WIND 170	SPEED 18KT	WEATHER 2	DOMINANT WAVES 180 10 11		
Z	T	S	C2	PC4	S103	NC2	NC3	DT	Z	T	S	C2	SIGT	DT	CD
									0A	24.43	33.55		22.440	541.0	0
									1CA	24.43	33.55		22.440	541.0	.054
									2CA	24.35	33.77		22.630	522.8	.107
									30	22.68	34.03		23.311	457.7	.156
									5C	19.50	35.01		24.919	304.4	.233
									75	17.50	35.04		25.443	254.5	.303
									10C	16.74	35.09		25.663	233.6	.365
									125	15.95	35.10		25.854	215.5	.422
									15C	15.81	35.10		25.886	212.4	.477
									20C	14.65	35.03		26.090	193.1	.581
									25C	13.12	34.94		26.341	169.2	.674
									30C	12.25	34.88		26.467	157.3	.760
									40C	9.42	34.72		26.850	120.9	.907
									50C	7.72	34.63		27.045	102.4	1.027
									600	6.95	34.61		27.134	94.0	1.134

RV ALEXANDER AGASSIZ

MUCCAUBER EXPEDITION

85

LATITUDE 0 03.0N			LONGITUDE 86 43.3W		PC/DAY/YR 12/04/65		MESSENGER TIME 0127		BOTTOM 2813M	WIND 180	SPEED 15KT	WEATHER 1	DOMINANT WAVES 180 10 11		
Z	T	S	C2	PC4	S103	NC2	NC3	DT	Z	T	S	C2	SIGT	DT	CD
									C	24.23	33.70		22.612	524.5	0
									1C	24.12	33.70		22.645	521.3	.052
									2C	23.28	33.88		23.026	484.9	.103
									3C	21.60	34.88		24.258	367.3	.145
									5C	18.72	35.08		25.172	280.3	.210
									75	17.12	35.04		25.535	245.8	.277
									100	16.53	35.11		25.728	227.5	.337
									125	16.10	35.14		25.850	215.8	.393
									150	15.50	35.08		25.941	207.2	.447
									20C	14.74	35.00		26.047	197.1	.551
									250	13.34	34.94		26.296	173.5	.646
									30C	12.68	34.91		26.406	163.1	.734
									40C	9.60	34.72		26.821	123.7	.886
									50C	8.07	34.65		27.009	105.8	1.009
									60C	6.91	34.60		27.137	93.7	1.118

RV ALEXANDER AGASSIZ

MUCCAUBER EXPEDITION

86

LATITUDE 0 03.5N			LONGITUDE 87 07.0W		PC/DAY/YR 12/04/65		MESSENGER TIME 0337		BOTTOM 2583M	WIND 180	SPEED 12KT	WEATHER 1	DOMINANT WAVES 180 10 11		
Z	T	S	C2	PC4	S103	NC2	NC3	DT	Z	T	S	C2	SIGT	DT	CD
									C	24.00	33.84		22.786	507.9	0
									10	24.00	33.84		22.786	507.9	.051
									20	23.72	33.89		22.906	496.4	.101
									30	22.30	34.46		23.744	416.3	.147
									50	19.58	35.06		24.936	302.7	.219
									75	17.38	35.01		25.449	253.9	.289
									100	16.55	34.98		25.623	237.4	.351
									125	16.23	35.10		25.790	221.6	.409
									150	15.66	35.01		25.851	215.8	.465
									20C	15.18	35.04		25.981	203.4	.573
									250	13.51	34.96		26.277	175.3	.671
									30C	12.82	34.93		26.393	164.2	.759
									40C	9.52	34.73		26.842	121.7	.910
									500	7.67	34.62		27.045	102.4	1.031
									60C	6.96	34.60		27.130	94.3	1.138

A1 THE SALINITY VALUES AT THESE DEPTHS WERE CFF-SCALE ON THE S/T/D ANALOG RECORDING. THE VALUE OF THE WATER SAMPLE COLLECTED FROM THE SURFACE FOR CALIBRATION OF THE INSTRUMENT WAS TABULATED AND THE VALUES FOR OTHER DEPTHS WERE INTERPOLATED.

RV ALEXANDER AGASSIZ										MUDDAUBER EXPEDITION				87			
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		GMT		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
C 04.1N		87 26.2W		12/04/65		0611				2602M	190	10KT	1	180 06			
Z	T	S	C2	PC4	S103	NC2	NC3	DT	Z	T	S	O2	SIGT	DT	CD		
									C	23.95	33.94		22.876	499.2	0		
									1C	23.96	33.95		22.881	498.8	.050		
									2C	23.88	33.96		22.912	495.8	.100		
									3C	23.47	34.05		23.100	477.9	.148		
									5C	20.40	34.83		24.546	339.9	.231		
									75	18.44	35.06		25.227	275.1	.308		
									100	16.73	34.99		25.589	240.7	.373		
									125	16.04	35.03		25.780	222.5	.432		
									150	15.80	35.04		25.842	216.6	.488		
									200	14.50	35.02		26.114	190.7	.592		
									250	13.47	34.97		26.292	173.8	.687		
									300	12.80	34.93		26.397	163.9	.775		
									400	10.00	34.75		26.776	127.9	.929		
									500	7.92	34.64		27.024	104.4	1.054		
									600	7.00	34.60		27.125	94.9	1.163		

RV ALEXANDER AGASSIZ										MUDDAUBER EXPEDITION				88			
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		GMT		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
C 05.0N		87 42.0W		12/04/65		0828				2574M	180	15KT	2	180			
Z	T	S	C2	PC4	S103	NC2	NC3	DT	Z	T	S	O2	SIGT	DT	CD		
									C	23.90	33.89		22.853	501.4	0		
									1C	23.92	33.90		22.855	501.3	.050		
									2C	23.87	33.92		22.885	498.4	.100		
									3C	23.63	33.98		23.000	487.4	.150		
									5C	19.75	34.83		24.717	323.6	.231		
									75	18.35	35.00		25.204	277.3	.307		
									100	17.50	35.01		25.420	256.7	.374		
									125	15.94	34.96		25.749	225.4	.435		
									150	15.28	35.04		25.959	205.5	.490		
									200	14.56	35.01		26.089	193.1	.592		
									250	13.28	34.95		26.316	171.6	.687		
									300	12.68	34.92		26.413	162.3	.774		
									400	9.93	34.75		26.788	126.8	.927		
									500	8.05	34.65		27.012	105.5	1.052		
									600	6.91	34.61		27.145	92.9	1.160		

RV ALEXANDER AGASSIZ										MUDDAUBER EXPEDITION				89			
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		GMT		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
C 05.5N		88 07.8W		12/04/65		1046				2473M	170	16KT	2	180			
Z	T	S	C2	PC4	S103	NC2	NC3	DT	Z	T	S	O2	SIGT	DT	CD		
									0	23.93	33.87		22.829	503.7	0		
									1C	23.92	33.87		22.832	503.4	.050		
									2C	23.92	33.87		22.832	503.4	.101		
									3C	23.87	33.89		22.862	500.6	.151		
									5C	19.50	34.77		24.736	321.8	.234		
									75	18.52	35.00		25.161	281.3	.310		
									100	17.58	35.01		25.401	258.5	.378		
									125	15.53	34.99		25.865	214.4	.438		
									150	15.09	35.04		26.001	201.5	.491		
									200	14.57	35.02		26.099	192.2	.592		
									250	13.43	34.96		26.293	173.8	.686		
									300	12.29	34.86		26.443	159.5	.773		
									400	9.30	34.73		26.878	118.2	.920		
									500	8.09	34.65		27.006	106.1	1.041		
									600	7.04	34.61		27.127	94.6	1.151		

RV ALEXANDER AGASSIZ										MUDDAUBER EXPEDITION				90			
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		GMT		BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
C 07.0N		88 25.6W		12/04/65		1318				2413M	160	14KT	2	170 08 07			
Z	T	S	C2	PC4	S103	NC2	NC3	DT	Z	T	S	O2	SIGT	DT	CD		
									0	24.07	33.81		22.743	512.0	0		
									1C	24.07	33.81		22.743	512.0	.051		
									2C	23.95	33.82		22.774	509.0	.102		
									3C	23.74	33.89		22.900	497.0	.153		
									5C	19.07	34.99		25.014	295.3	.232		
									75	18.58	35.19		25.291	269.0	.303		
									100	16.18	34.96		25.694	230.7	.366		
									125	15.20	35.03		25.969	204.5	.422		
									150	15.05	35.06		26.025	199.2	.473		
									200	13.90	34.96		26.195	183.0	.571		
									250	13.28	34.95		26.316	171.6	.663		
									300	11.97	34.85		26.497	154.4	.748		
									400	9.22	34.70		26.868	119.2	.893		
									500	8.28	34.66		26.985	108.1	1.015		
									600	7.08	34.61		27.121	95.2	1.126		

91

LATITUDE 0 07.7N			LONGITUDE 88 38.5W			PC/DAY/YR 12/04/65			MESSENGER 1441		TIME GRT	BOTTOM 2425M	WIND 19C	SPEED 13KT	WEATHER 2	DOMINANT WAVES 190 06 06		
Z	T	S	C2	PC4	SIO3	NC2	NC3	CT	Z	T	S	G2	SIGT	DT	EE			
									0	24.21	33.80		22.694	516.7	0			
									10	24.20	33.80		22.697	516.4	.052			
									20	24.20	33.81		22.704	515.7	.103			
									30	23.90	33.82		22.800	506.5	.155			
									50	19.46	34.98		24.907	305.6	.236			
									75	18.93	35.20		25.210	276.7	.309			
									100	16.98	35.08		25.599	239.7	.375			
									125	15.45	35.03		25.904	210.7	.432			
									150	14.98	35.04		26.025	199.2	.484			
									200	14.33	35.02		26.151	187.3	.583			
									250	13.34	34.96		26.311	172.0	.676			
									300	12.32	34.90		26.468	157.1	.762			
									400	5.72	34.75		26.824	123.4	.910			
									500	8.41	34.66		26.965	110.0	1.036			
									600	7.10	34.60		27.111	96.2	1.149			

92

LATITUDE 0 08.0N		LONGITUDE 88 58.8W		PC/DAY/YR 12/04/65		PASSENGER 1653		TIME GMT		BOTTOM 1956F		WIND 180		SPEED 16KT		WEATHER 1		DOMINANT WAVES 170 08 08	
Z	T	S	C2	PC4	S103	NC2	NC3	CT	Z	T	S	C2	S1GT	DT	ED				
	0								0	24.43	33.89		22.696	516.4	0				
	10								10	24.42	33.89		22.699	516.1	.052				
	20								20	24.40	33.89		22.705	515.6	.103				
	30								30	24.28	33.90		22.749	511.4	.155				
	50								50	19.86	34.97		24.790	316.7	.238				
	75								75	19.06	35.05		25.063	290.7	.314				
	100								100	16.25	35.12		25.800	220.5	.379				
	125								125	15.75	35.06		25.869	214.0	.434				
	150								150	15.12	35.03		25.987	202.8	.487				
	200								200	14.37	35.01		26.134	188.8	.588				
	250								250	13.45	34.96		26.281	174.9	.682				
	300								300	12.32	34.87		26.445	159.3	.769				
	400								400	9.38	34.71		26.849	121.0	.917				
	500								500	7.84	34.61		27.012	105.5	1.039				
	600								600	6.72	34.59		27.155	92.0	1.147				

93

LATITUDE 0 02.5N			LONGITUDE 89 29.1W			MO/DAY/YR 12/04/65			MESSENGER 1940		TIME GMT	BOTTOM 1863M	WIND 200	SPEED 18KT	WEATHER 1	DOMINANT WAVES 180 07 07		
Z	T	S	C2	PC4	SIG3	NC2	NC3	DT	Z	T	S	C2	SIGT	DT	DD			
									0	24.28	34.08			22.884	498.5	0		
									10	24.07	34.09			22.954	491.8	.050		
									20	23.98	34.10			22.988	488.5	.099		
									30	23.92	34.09			22.998	487.6	.148		
									50	20.37	34.91			24.614	333.4	.230		
									75	17.92	35.07			25.364	262.1	.305		
									100	15.72	35.10			25.906	210.5	.365		
									125	15.38	35.06			25.952	206.1	.418		
									150	14.98	35.02			26.010	200.6	.469		
									200	14.30	35.01			26.149	187.4	.569		
									250	13.47	34.96			26.285	174.5	.663		
									300	12.26	34.87			26.453	158.6	.750		
									400	9.67	34.73			26.817	124.1	.899		
									500	8.27	34.66			26.986	108.0	1.024		
									600	7.02	34.61			27.130	94.4	1.134		

RV ALEXANDER AGASSIZ

MUCCAUBER EXPEDITION

P 7

LATITUDE		LONGITUDE		MC/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
C 00.0		89 40.0W		12/04/65		2244		GMT	1715M	180	19KT	1	190 06 06		
Z	T	S	O2	PC4	SI03	NC2	NC3	DT	Z	T	S	O2	SIGT	DT	CD
0	23.86	34.172	5.54					480.0	0	23.86	34.172	5.54	23.078	480.0	0
10	23.78	34.170	5.00					477.9	10	23.78	34.170	5.00	23.100	477.9	.048
35	22.47	34.451	4.29					421.6	20	23.72	34.180	4.65	23.125	475.5	.096
66	19.66	34.936	3.66					313.7	30	23.66	34.189	4.39	23.150	473.0	.143
90	17.16	35.068	2.85					244.7	50	21.11	34.676	4.00	24.237	369.4	.228
105	15.77	35.033	2.79					216.4	75	19.08	34.958	3.32	24.989	297.7	.312
119	15.38	35.059	2.68					206.2	100	16.14	35.050	2.81	25.771	223.3	.377
155	14.92	35.018	2.73					199.5	125	15.27	35.042	2.68	25.963	205.1	.432
180	14.71	35.013	2.55					195.5	150	14.95	35.015	2.72	26.012	200.5	.484
214	13.58	34.959	1.90					176.8	200	14.05	34.980	2.15	26.179	184.6	.582
249	13.31	34.945	2.03					172.5	250	13.25	34.943	2.02	26.310	172.2	.675
319	11.33	34.832	.74					144.3	300	11.92	34.861	1.15	26.516	152.6	.759
438	9.00	34.701	.55					115.8	400	10.23	34.782	.61	26.761	129.3	.909
566	7.42	34.628	1.02					98.4	500	7.95	34.649	.75	27.026	104.2	1.034
710	6.13	34.589	1.29					84.6	600	7.09	34.616	1.09	27.125	94.9	1.143
874	4.76	34.590	1.73					68.8	700	6.21	34.592	1.27	27.224	85.5	1.243
1044	4.28	34.600	1.86					63.1	800	5.32	34.586	1.54	27.331	75.3	1.333
1259	3.69	34.601	1.99					57.2	1000	4.36	34.599	1.84	27.451	63.9	1.492
									1200	3.90	34.600	1.95	27.500	59.3	1.636

RV ALEXANDER AGASSIZ

MUCCAUBER EXPEDITION

94

LATITUDE 0 00.0			LONGITUDE 89 40.0W			PC/DAY/YR 12/04/65		MESSENGER TIME 2325 GMT		BOTTOM 1715M	WIND 180	SPEED 18KT	WEATHER 1	DOMINANT WAVES 190 06 06		
Z	T	S	C2	PO4	SI03	NC2	NC3	CT	Z	T	S		C2	SIGT	DT	CD
									0	23.86	34.18			23.084	479.4	0
									10	23.86	34.18			23.084	479.4	.048
									20	23.73	34.19			23.130	475.0	.096
									30	23.67	34.19			23.147	473.4	.143
									50	21.33	34.71			24.203	372.6	.228
									75	19.45	34.92			24.863	309.7	.314
									100	16.05	35.04			25.785	222.0	.381
									125	15.35	35.07			25.966	204.8	.435
									150	15.00	35.04			26.021	199.6	.487
									200	13.73	34.94			26.216	181.1	.585
									250	13.21	34.94			26.322	171.0	.676
									300	11.91	34.86			26.516	152.6	.760
									400	10.15	34.75			26.751	130.3	.910
									500	8.30	34.66			26.982	108.4	1.038
									600	7.12	34.61			27.116	95.7	1.150

RV ALEXANDER AGASSIZ

MUCCAUBER EXPEDITION

95

LATITUDE 0 00.0			LONGITUDE 90 02.6W			MC/DAY/YR 12/05/65		MESSENGER C152		TIME GMT	BOTTOM 843M	WIND 160	SPEED 17KT	WEATHER 1	DOMINANT WAVES	
Z	T	S	C2	PC4	SI03	NC2	NC3	DT	Z	T	S	O2	SIGT	DT	CD	
									0	23.76	34.29		23.196	468.7	0	
									10	23.77	34.29		23.193	468.9	.047	
									20	23.70	34.29		23.214	467.0	.094	
									30	22.68	34.45		23.629	427.3	.139	
									50	19.77	34.91		24.773	318.3	.213	
									75	18.45	34.96		25.148	282.6	.289	
									100	16.74	35.06		25.640	235.8	.355	
									125	15.18	35.04		25.981	203.4	.410	
									150	14.85	35.01		26.031	198.7	.462	
									200	14.00	34.99		26.198	182.8	.560	
									250	13.25	34.96		26.330	170.3	.651	
									300	12.01	34.87		26.505	153.6	.735	
									400	9.87	34.72		26.775	128.0	.884	
									500	8.32	34.67		26.987	107.9	1.011	
									600	6.97	34.61		27.137	93.7	1.121	

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

96

LATITUDE 0 00.0			LONGITUDE 90 20.0W		MO/DAY/YR 12/05/65		MESSENGER TIME 0423		BOTTOM 676M	WIND 170	SPEED 09KT	WEATHER 1	DOMINANT WAVES 180 05 06		
Z	T	S	02	PC4	SI03	NO2	NO3	DT	Z	T	S	02	SIGT	DT	CD
									C	23.50	34.34		23.310	457.8	0
									10	23.46	34.33		23.314	457.4	.046
									20	23.36	34.34		23.351	453.9	.091
									30	23.28	34.35		23.381	451.0	.137
									50	20.17	34.94		24.690	326.2	.215
									75	19.15	34.92		24.941	302.3	.294
									100	17.45	35.04		25.446	254.3	.364
									125	15.33	35.02		25.932	208.0	.423
									150	14.97	35.03		26.020	199.7	.475
									200	14.30	35.00		26.142	188.1	.574
									250	13.22	34.95		26.328	170.4	.667
									300	12.28	34.88		26.461	157.8	.753
									400	9.31	34.71		26.861	119.9	.900
									500	8.43	34.66		26.962	110.3	1.023
									600	7.20	34.62		27.112	96.0	1.136

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

97

LATITUDE 0 00.0			LONGITUDE 90 39.0W		MO/DAY/YR 12/05/65		MESSENGER TIME 0629		BOTTOM 2210M	WIND 170	SPEED 14KT	WEATHER 1	DOMINANT WAVES 180 05		
Z	T	S	02	PD4	SI03	NO2	NO3	DT	Z	T	S	02	SIGT	DT	CD
									C	23.51	34.34		23.307	458.1	0
									10	22.95	34.37		23.492	440.5	.045
									20	22.77	34.45		23.604	429.8	.089
									30	22.18	34.60		23.884	403.0	.130
									50	20.18	35.00		24.733	322.1	.203
									75	18.85	34.92		25.017	295.0	.281
									100	17.43	35.02		25.445	254.3	.350
									125	15.43	35.04		25.926	208.7	.409
									150	14.87	35.02		26.034	198.3	.461
									200	14.40	35.00		26.120	190.1	.560
									250	12.98	34.94		26.369	166.6	.653
									300	12.01	34.88		26.513	152.9	.736
									400	9.13	34.71		26.890	117.1	.879
									500	8.00	34.65		27.019	104.8	.998
									600	7.07	34.62		27.131	94.3	1.107

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

98

LATITUDE 0 00.0			LONGITUDE 91 00.2W		MO/DAY/YR 12/05/65		MESSENGER TIME 0843		BOTTOM 2611M	WIND 170	SPEED 18KT	WEATHER 1	DOMINANT WAVES 180 05		
Z	T	S	02	PC4	SI03	NO2	NO3	DT	Z	T	S	02	SIGT	DT	CD
									C	23.26	34.34		23.380	451.1	0
									10	23.24	34.35		23.393	449.9	.045
									20	23.13	34.40		23.463	443.2	.090
									30	22.91	34.47		23.579	432.1	.134
									50	20.00	34.96		24.750	320.4	.209
									75	18.73	35.05		25.147	282.7	.285
									100	17.25	35.04		25.504	248.8	.352
									125	16.22	35.11		25.800	220.6	.412
									150	14.93	35.03		26.029	198.9	.465
									200	14.35	35.01		26.130	189.2	.565
									250	12.69	34.92		26.411	162.5	.656
									300	11.78	34.83		26.518	152.4	.738
									400	9.58	34.73		26.832	122.6	.884
									500	8.27	34.66		26.986	108.0	1.008
									600	7.13	34.62		27.122	95.1	1.119

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

99

LATITUDE 2 00.0N			LONGITUDE 92 00.0W		MO/DAY/YR 12/06/65		MESSENGER TIME 1332		BOTTOM 2275M	WIND 180	SPEED 12KT	WEATHER 2	DOMINANT WAVES 180 05 07		
Z	T	S	02	PC4	SI03	NO2	NO3	DT	Z	T	S	02	SIGT	DT	CD
									C	26.25	33.72		22.013	581.8	0
									10	26.25	33.72		22.013	581.8	.058
									20	26.25	33.73		22.021	581.1	.116
									30	26.26	33.73		22.018	581.4	.175
									50	24.53	34.10		22.825	504.1	.283
									75	18.90	34.90		24.989	297.7	.384
									100	15.90	34.97		25.766	223.9	.450
									125	14.74	34.93		25.993	202.2	.504
									150	14.50	35.00		26.099	192.2	.555
									200	14.05	34.99		26.157	183.8	.651
									250	13.00	34.91		26.342	169.1	.742
									300	11.97	34.83		26.482	155.9	.827
									400	9.34	34.70		26.848	121.1	.974
									500	7.80	34.63		27.034	103.5	1.094
									600	6.85	34.60		27.145	92.9	1.201

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

100

LATITUDE 3 42.1N			LONGITUDE 93 11.2W			MO/DAY/YR 12/07/65		MESSENGER TIME 0131		BOTTOM 2798M	WIND 150	SPEED 18KT	WEATHER 5	DOMINANT WAVES 190 09 09		
Z	T	S	C2	PC4	SI03	NC2	NC3	CT	Z	T	S	O2	SIGT	DT	CD	
									C	26.62	33.91		22.040	579.2	0	
									1C	26.62	33.92		22.047	578.5	.058	
									2C	26.62	33.92		22.047	578.5	.116	
									3C	26.62	33.92		22.047	578.5	.174	
									50	26.59	33.93		22.064	576.9	.290	
									75	20.25	34.88		24.624	332.5	.404	
									100	17.67	35.03		25.394	259.1	.479	
									125	16.00	34.97		25.743	226.0	.540	
									150	14.52	34.94		26.048	197.0	.594	
									200	13.58	34.95		26.254	177.4	.690	
									250	13.08	34.92		26.333	169.9	.780	
									300	12.38	34.87		26.433	160.4	.866	
									400	10.51	34.75		26.688	136.3	1.023	
									500	8.20	34.63		26.974	109.2	1.155	
									600	6.82	34.58		27.134	94.0	1.265	

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

101

LATITUDE 5 16.8N			LONGITUDE 94 08.4W			MO/DAY/YR 12/07/65		MESSENGER TIME 1332		BOTTOM 3611M	WIND 200	SPEED 13KT	WEATHER 6	DOMINANT WAVES 180 08 06		
Z	T	S	C2	PC4	SI03	NC2	NC3	CT	Z	T	S	O2	SIGT	DT	DD	
									C	27.15	33.11		21.271	652.9	0	
									1C	27.16	33.11		21.268	653.2	.065	
									2C	27.16	33.11		21.268	653.2	.131	
									3C	27.17	33.12		21.272	652.8	.196	
									5C	18.50	34.48		24.769	318.6	.294	
									75	14.95	34.81		25.855	215.4	.361	
									100	13.86	34.94		26.188	183.7	.411	
									125	13.40	34.93		26.276	175.4	.457	
									150	13.18	34.91		26.305	172.6	.501	
									200	12.60	34.87		26.390	164.5	.588	
									250	11.97	34.83		26.482	155.9	.671	
									300	11.12	34.76		26.586	145.9	.750	
									400	9.45	34.69		26.822	123.6	.892	
									500	8.06	34.64		27.003	106.4	1.016	
									600	7.12	34.60		27.108	96.4	1.126	

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

102

LATITUDE 7 05.2N			LNGITUDE 95 36.5W			MO/DAY/YR 12/08/65		MESSENGER TIME 0331		BOTTOM 3630M	WIND 040	SPEED 09KT	WEATHER 6	DOMINANT WAVES		
Z	T	S	C2	PC4	SI03	NC2	NC3	DT	Z	T	S	O2	SIGT	DT	CD	
									0	27.94	32.99		20.927	685.9	0	
									1C	27.96	33.09		20.995	679.3	.068	
									20	24.75	33.54		22.337	550.8	.130	
									3C	20.25	34.38		24.243	368.7	.176	
									5C	14.43	34.74		25.914	209.8	.234	
									75	13.49	34.82		26.173	185.2	.284	
									100	13.00	34.83		26.280	175.0	.329	
									125	12.68	34.81		26.328	170.4	.373	
									150	12.49	34.84		26.389	164.7	.416	
									200	11.97	34.80		26.458	156.1	.499	
									250	11.25	34.76		26.562	148.2	.578	
									300	10.75	34.73		26.630	141.8	.654	
									400	9.66	34.68		26.779	127.6	.796	
									500	8.41	34.63		26.941	112.2	.925	
									600	7.23	34.58		27.077	99.4	1.040	

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

103

LATITUDE 8 46.0N			LONGITUDE 96 49.2W			MO/DAY/YR 12/08/65		MESSENGER TIME 1538		BOTTOM 3781M	WIND 090	SPEED 16KT	WEATHER 1	DOMINANT WAVES 090 12 08		
Z	T	S	C2	PC4	SI03	NC2	NC3	DT	Z	T	S	O2	SIGT	DT	CD	
									C	27.57	33.17		21.181	661.5	0	
									1C	27.57	33.17		21.181	661.5	.066	
									2C	27.50	33.48		21.754	606.6	.130	
									3C	23.10	33.99		23.154	472.7	.184	
									5C	15.77	34.71		25.596	240.0	.255	
									75	13.28	34.78		26.185	184.1	.309	
									100	12.84	34.84		26.320	171.2	.354	
									125	12.48	34.82		26.375	165.9	.397	
									150	12.15	34.82		26.432	160.6	.438	
									200	11.58	34.77		26.509	153.3	.519	
									250	11.08	34.75		26.586	146.0	.596	
									300	10.78	34.74		26.632	141.6	.672	
									400	9.88	34.68		26.742	131.1	.816	
									500	8.53	34.61		26.907	115.5	.948	
									600	7.27	34.57		27.063	100.7	1.065	

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PHYSICAL AND CHEMICAL DATA. EXPEDITION X, 20-25 APRIL 1965. LA --ETC(U)

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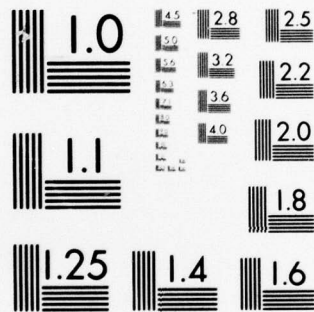
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RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

104

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES	
10 27.0N		98 11.9W		12/09/65		0406		4091M		C60		11KT		1		060 12 08	
Z	T	S	C2	PC4	SI03	NC2	NC3	DT	Z	T	S	C2	SIGT	DT	CG		
									0	26.98	33.60		21.693	612.5	0		
									10	26.96	33.60		21.699	611.8	.061		
									20	22.05	34.27		23.670	423.4	.113		
									30	17.80	34.53		24.980	298.5	.149		
									50	14.08	34.75		25.996	202.0	.200		
									75	13.04	34.76		26.218	180.9	.248		
									100	12.41	34.75		26.335	169.8	.292		
									125	12.16	34.77		26.399	163.7	.335		
									150	11.79	34.77		26.469	157.0	.376		
									200	11.25	34.76		26.562	148.2	.454		
									250	10.77	34.73		26.626	142.2	.529		
									300	10.28	34.71		26.697	135.4	.602		
									400	9.02	34.63		26.845	121.3	.737		
									500	7.83	34.59		26.998	108.9	.860		
									600	6.91	34.56		27.106	96.7	.971		

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

105

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES	
12 08.0N		99 14.7W		12/09/65		1550		3549M		C80		16KT		1		10 08	
Z	T	S	C2	PC4	SI03	NC2	NC3	DT	Z	T	S	C2	SIGT	DT	CG		
									0	28.64	33.88		21.365	643.9	0		
									10	28.64	33.88		21.365	643.9	.064		
									20	28.64	33.88		21.365	643.9	.129		
									30	28.64	33.88		21.365	643.9	.193		
									50	26.42	33.84		22.050	578.2	.316		
									75	23.83	34.10		23.032	484.3	.449		
									100	17.05	34.64		25.245	273.4	.545		
									125	13.82	34.80		26.089	193.1	.604		
									150	13.04	34.81		26.256	177.2	.651		
									200	12.33	34.79		26.381	165.4	.739		
									250	11.71	34.77		26.484	155.6	.822		
									300	10.98	34.73		26.588	145.7	.901		
									400	9.14	34.63		26.826	123.2	1.043		
									500	8.00	34.59		26.972	109.3	1.167		
									600	6.95	34.56		27.100	97.2	1.280		

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

106

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES	
13 50.0N		100 28.1W		12/10/65		0352		3342M		C60		06KT		1		090 06 06	
Z	T	S	C2	PC4	SI03	NC2	NC3	DT	Z	T	S	C2	SIGT	DT	CG		
									0	28.49	33.81		21.362	644.2	0		
									10	28.23	33.80		21.440	636.7	.064		
									20	28.18	33.81		21.464	634.4	.128		
									30	27.90	33.77		21.525	628.6	.191		
									50	25.67	33.78		22.238	560.3	.310		
									75	25.20	33.82		22.412	543.6	.449		
									100	24.92	33.85		22.519	533.4	.584		
									125	24.03	33.95		22.860	500.8	.715		
									150	16.65	34.62		25.324	265.8	.812		
									200	13.32	34.82		26.207	181.9	.926		
									250	12.51	34.81		26.362	167.2	1.016		
									300	11.88	34.78		26.460	157.9	1.101		
									400	10.55	34.70		26.642	140.7	1.259		
									500	8.66	34.60		26.879	118.1	1.397		
									600	7.35	34.56		27.044	102.5	1.517		

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

107

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER TIME		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES	
15 31.0N		101 42.2W		12/10/65		1653		3496M		320		04KT		0		320 02 08	
Z	T	S	C2	PC4	SI03	NC2	NC3	DT	Z	T	S	C2	SIGT	DT	CG		
									0	29.12	33.71		21.078	671.4	0		
									10	28.93	33.72		21.149	664.6	.067		
									20	28.96	33.87		21.251	654.8	.133		
									30	28.96	33.88		21.258	654.1	.198		
									50	28.87	33.99		21.371	643.3	.328		
									75	21.75	34.46		23.898	401.7	.460		
									100	15.80	34.66		25.550	244.3	.541		
									125	14.32	34.81		25.991	202.4	.598		
									150	13.44	34.82		26.183	184.2	.647		
									200	12.48	34.81		26.367	166.7	.737		
									250	11.82	34.77		26.464	157.6	.821		
									300	11.17	34.72		26.546	149.8	.901		
									400	9.72	34.63		26.730	132.3	1.050		
									500	8.37	34.56		26.893	116.8	1.183		
									600	7.13	34.52		27.044	102.5	1.302		

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

H 8

LATITUDE 17 15.3N			LONGITUDE 103 00.0W			PC/DAY/YR 12/11/65			MESSENGER TIME 0516			BOTTOM 4270M			WIND 300			SPEED 08KT			WEATHER 1			DOMINANT WAVES		
Z	T	S	C2	PC4	SIG3	NC2	NC3	DT	Z	T	S	C2	SIGT	DT	CD											
0	28.47	34.099						622.8	C	28.47	34.099			21.585	622.8	0										
11	28.46	34.088						623.3	10	28.46	34.088			21.581	623.2	.062										
39	28.26	34.142						613.1	20	28.40	34.106			21.614	620.0	.125										
64	21.73	34.428						403.5	30	28.32	34.125			21.652	616.4	.186										
82	18.44	34.511						314.9	50	25.62	34.231			22.594	526.3	.301										
96	16.38	34.597						261.5	75	15.61	34.487			24.493	344.9	.411										
109	15.14	34.727						225.4	100	15.95	34.640			25.500	249.1	.465										
128	13.76	34.783						193.2	125	13.93	34.780			26.050	196.8	.542										
147	13.33	34.830						181.4	150	13.25	34.832			26.231	179.6	.590										
170	12.76	34.833						170.2	200	12.36	34.815			26.396	164.0	.678										
193	12.42	34.817						165.1	250	11.90	34.797			26.469	157.1	.761										
216	12.23	34.814						161.8	300	11.30	34.765			26.557	148.7	.841										
244	11.96	34.800						157.9																		
278	11.60	34.781						152.8																		
326	10.88	34.743						143.1																		

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

108

LATITUDE 17 15.3N			LONGITUDE 103 00.0W			PC/DAY/YR 12/11/65			MESSENGER TIME 0539			BOTTOM 4270M			WIND 300			SPEED 08KT			WEATHER 1			DOMINANT WAVES		
Z	T	S	C2	PC4	SIG3	NC2	NC3	CT	Z	T	S	C2	SIGT	DT	LC											
									0	28.52	34.10			21.569	624.3	0										
									10	28.52	34.11			21.577	623.6	.062										
									20	28.47	34.12			21.601	621.3	.125										
									30	28.45	34.13			21.615	619.9	.187										
									50	26.22	34.18			22.369	547.8	.304										
									75	15.80	34.51			24.460	348.1	.417										
									100	16.05	34.61			25.455	253.4	.492										
									125	13.98	34.77			26.032	198.5	.550										
									150	13.24	34.82			26.224	180.3	.598										
									200	12.44	34.82			26.383	165.2	.687										
									250	12.02	34.80			26.449	159.0	.771										
									300	11.44	34.76			26.527	151.5	.852										
									400	10.13	34.67			26.692	135.9	1.003										
									500	8.58	34.57			26.868	119.2	1.140										
									600	7.35	34.56			27.044	102.5	1.260										

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

109

LATITUDE 18 54.1N			LONGITUDE 104 16.5W			PC/DAY/YR 12/11/65			MESSENGER TIME 1747			BOTTOM 464M			WIND 130			SPEED 04KT			WEATHER 1			DOMINANT WAVES		
Z	T	S	C2	PC4	SIG3	NC2	NC3	DT	Z	T	S	C2	SIGT	DT	CD											
									C	27.81	34.21			21.884	594.1	0										
									10	27.75	34.21			21.904	592.2	.059										
									20	27.28	34.21			22.056	577.7	.118										
									30	24.67	34.32			22.949	492.3	.171										
									50	21.18	34.39			24.001	391.8	.260										
									75	17.28	34.50			25.083	288.8	.346										
									100	15.14	34.63			25.675	232.5	.412										
									125	13.85	34.76			26.052	196.7	.466										
									150	13.34	34.78			26.172	185.2	.515										
									200	12.78	34.78			26.285	174.5	.607										
									250	12.15	34.76			26.385	165.0	.695										
									300	11.83	34.74			26.438	159.9	.779										
									400	10.74	34.68			26.592	145.3	.940										

RV ALEXANDER AGASSIZ

MUDDAUBER EXPEDITION

110

LATITUDE 19 17.6N			LONGITUDE 106 35.0W			PC/DAY/YR 12/14/65			MESSENGER TIME 0609			BOTTOM 3603M			WIND C10			SPEED 11KT			WEATHER 1			DOMINANT WAVES		
Z	T	S	C2	PC4	SIG3	NC2	NC3	DT	Z	T	S	C2	SIGT	DT	CD											
									0	27.77	34.29			21.958	587.1	0										
									10	27.78	34.29			21.954	587.4	.059										
									20	27.78	34.29			21.954	587.4	.118										
									30	27.78	34.29			21.954	587.4	.176										
									50	23.65	34.40			23.312	457.6	.281										
									75	17.98	34.41			24.845	311.5	.378										
									100	15.17	34.57			25.622	237.5	.447										
									125	13.89	34.65			25.958	205.5	.503										
									150	13.18	34.75			26.182	184.3	.553										
									200	12.33	34.80			26.389	164.6	.643										
									250	11.60	34.77			26.505	151.6	.725										
									300	10.89	34.73			26.604	144.2	.803										
									400	9.35	34.64			26.800	125.7	.945										
									500	7.86	34.55			26.962	110.3	1.072										
									600	6.98	34.53			27.072	99.8	1.186										

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LATITUDE 19 05.0N		LONGITUDE 108 00.2W		PC/DAY/YR 12/14/65		PASSENGER 1533		TIME GMT	BOTTOM 3832M	WIND 110	SPEED 07KT	WEATHER 2	DOMINANT WAVES 320 GT 66		
Z	T	S	C2	PC4	SIO3	NC2	NC3	DT	Z	T	S	C2	SIGT	DT	EE
	0								0	27.37	34.32		22.109	572.6	0
	10								10	27.36	34.32		22.106	572.9	.057
	20								20	27.36	34.32		22.106	572.9	.115
	30								30	27.36	34.33		22.114	572.2	.172
	50								50	25.80	34.45		22.702	515.8	.261
	75								75	20.20	34.25		24.158	376.9	.393
	100								100	15.68	34.45		25.416	257.1	.473
	125								125	14.35	34.62		25.838	216.9	.533
	150								150	13.63	34.70		26.051	196.7	.586
	200								200	12.43	34.78		26.354	168.0	.679
	250								250	11.66	34.76		26.486	155.4	.763
	300								300	10.89	34.72		26.597	144.9	.842
	400								400	5.27	34.62		26.797	125.0	.964
	500								500	7.83	34.56		26.974	109.1	1.110
	600								600	6.82	34.53		27.094	97.7	1.223

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LATITUDE 19 37.8N		LONGITUDE 108 31.0W		PG/DAY/YR 12/14/65		MESSENGER 2105		TIME GMT		BOTTOM 285FM		WIND 35C		SPEED 29KT		WEATHER 5		DOMINANT WAVES 350 10 05	
Z	T	S	OZ	PC4	S103	NO2	NC3	DT	Z	T	S	OZ	S1GT	DT	CG				
	C									27.19	34.15		22.039	579.3	0				
	1C									27.17	34.16		22.053	578.0	.058				
	2C									27.15	34.16		22.060	577.3	.116				
	3C									27.14	34.16		22.063	577.0	.174				
	5C									23.65	34.29		23.228	465.6	.278				
	75									18.22	34.27		24.679	327.3	.378				
	10C									15.83	34.41		25.352	263.2	.452				
	125									14.16	34.61		25.871	213.8	.513				
	15C									13.42	34.71		26.102	191.9	.564				
	20C									12.41	34.77		26.350	168.3	.657				
	25C									11.72	34.76		26.475	156.5	.741				
	30C									10.82	34.70		26.594	145.2	.819				
	40C									9.43	34.61		26.763	129.2	.964				
	50C									8.30	34.56		26.904	115.8	1.095				
	60C									7.00	34.50		27.046	102.3	1.214				

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LATITUDE 20 16.0N			LONGITUDE 109 07.0W			PC/DAY/YR 12/15/65			PASSENGER 0540			TIME GMT			BOTTOM 2546M			WIND C10			SPEED 19KT			WEATHER 6			DOMINANT WAVES 360 07		
Z	T	S	G2	PG4	S103	N02	N03	DT	Z	T	S	G2	SIGT	DT	LD														
	C	26.27	34.49										22.586	527.0	0														
	10	26.27	34.49										22.586	527.0	.053														
	20	26.27	34.49										22.586	527.0	.105														
	30	26.27	34.50										22.594	526.2	.158														
	50	24.00	34.15										23.020	485.5	.260														
	75	18.60	34.44										24.714	323.9	.361														
	100	15.43	34.57										25.564	243.0	.433														
	125	14.26	34.67										25.896	211.5	.491														
	150	13.38	34.68										26.087	193.3	.542														
	200	12.34	34.77										26.364	167.0	.635														
	250	11.62	34.75										26.486	155.5	.718														
	300	10.75	34.70										26.606	144.0	.756														
	400	9.13	34.60										26.804	125.3	.938														
	500	7.58	34.53										26.987	107.9	1.063														
	600	6.45	34.51										27.128	94.5	1.173														

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LATITUDE 20 38.0N			LONGITUDE 109 28.0W			PC/DAY/YR 12/15/65		PASSENGER 0916		TIME GMT		BOTTOM 2866P		WIND C80		SPEED GKT		WEATHER 6		DOMINANT WAVES		
Z	T	S	C2	PC4	SIG3	NC2	NC3	DT	Z	T	S	O2	SIGT	DT	ED							
									C	26.02	34.59		22.740	512.3	0							
									10	26.03	34.60		22.744	511.9	.051							
									20	26.05	34.60		22.738	512.5	.103							
									30	26.05	34.60		22.738	512.5	.154							
									50	22.60	34.25		23.501	439.6	.249							
									75	17.40	34.39		24.970	299.5	.342							
									100	15.87	34.72		25.581	241.4	.411							
									125	13.42	34.35		25.824	218.3	.469							
									150	12.71	34.55		26.121	190.1	.521							
									200	12.26	34.79		26.395	164.1	.612							
									250	11.82	34.78		26.471	156.8	.695							
									300	11.02	34.70		26.558	148.6	.774							
									400	5.78	34.63		26.720	133.2	.923							
									500	6.13	34.55		26.922	114.1	1.055							
									600	6.83	34.52		27.085	98.6	1.171							

RV ALEXANDER AGASSIZ

MUCCAUBER EXPEDITION

H 9

LATITUDE		LNGITUDE		PC/DAY/YR		PASSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
21 09.5N		109 57.5W		12/15/65		1446		GMT	3191P	C20	14KT	6	330 05 10		
Z	T	S	C2	PC4	SIG3	NC2	NC3	DT	Z	T	S	O2	SIGT	DT	CC
0	25.65	34.511	5.32					507.0	0	25.65	34.511	5.32	22.795	507.0	0
9	25.66	34.505	5.07					507.8	10	25.66	34.506	5.07	22.787	507.7	.051
29	25.66	34.513	5.09					507.2	20	25.66	34.510	5.08	22.790	507.4	.102
39	23.16	34.416	5.48					442.9	30	25.44	34.505	5.13	22.855	501.3	.152
53	20.28	34.151	5.62					386.1	50	20.84	34.210	5.61	23.956	396.2	.242
68	17.81	33.999	5.72					337.4	75	17.65	34.060	4.66	24.658	329.3	.333
91	17.29	34.741	1.99					271.4	100	16.48	34.740	1.56	25.456	253.3	.407
109	15.60	34.759	1.41					232.8	125	14.52	34.744	1.01	25.898	211.3	.466
128	14.38	34.741	.95					208.7	150	13.92	34.817	.96	26.079	194.1	.517
147	13.99	34.810	.95					195.8	200	12.78	34.796	.72	26.297	173.4	.612
175	13.42	34.845	1.00					182.0	250	12.03	34.772	.40	26.426	161.2	.698
208	12.60	34.779	.61					171.2	300	11.05	34.723	.40	26.562	148.2	.779
236	12.28	34.782	.39					165.0							
283	11.38	34.739	.42					152.0							
336	10.56	34.688	.36					141.7							
417		34.626	.35												
459		34.563	.34												
577		34.534	.35												

RV ALEXANDER AGASSIZ

MUCCAUBER EXPEDITION

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LATITUDE			LONGITUDE			MO/DAY/YR		PASSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES	
21 09.5N			109 57.5W			12/15/65		1508		GMT	3191M	C20	13KT	6	330 05 10	
Z	T	S	C2	PC4	SIG3	NC2	NC3	CT	Z	T	S	O2	SIGT	DT	CD	
									0	25.63	34.52		22.808	505.8	0	
									10	25.65	34.52		22.801	506.4	.051	
									20	25.65	34.52		22.801	506.4	.101	
									30	25.65	34.52		22.801	506.4	.152	
									50	21.03	34.18		23.883	403.1	.243	
									75	17.65	34.00		24.612	333.6	.336	
									100	16.72	34.77		25.423	256.5	.410	
									125	14.97	34.77		25.820	218.7	.471	
									150	14.15	34.88		26.081	193.9	.523	
									200	12.84	34.80		26.289	174.2	.618	
									250	12.00	34.76		26.422	161.5	.704	
									300	11.29	34.74		26.539	150.4	.786	
									400	9.84	34.63		26.710	134.2	.936	
									500	8.39	34.56		26.890	117.1	1.070	
									600	7.38	34.53		27.016	105.2	1.191	

RV ALEXANDER AGASSIZ

MUCCAUBER EXPEDITION

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LATITUDE		LONGITUDE		MO/DAY/YR		PASSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
21 47.4N		110 34.8W		12/15/65		2049		GMT	3169M				360 10 11		
Z	T	S	C2	PC4	SIG3	NC2	NC3	DT	Z	T	S	O2	SIGT	DT	CC
									0	25.57	34.37		22.713	514.8	0
									10	25.55	34.37		22.719	514.2	.051
									20	24.42	34.57		23.212	467.1	.101
									30	24.37	34.58		23.235	465.0	.147
									50	23.74	34.54		23.391	450.1	.239
									75	17.03	33.82		24.622	332.6	.337
									100	15.08	34.15		25.319	266.3	.413
									125	13.72	34.39		25.793	221.2	.475
									150	12.75	34.42		26.013	200.4	.528
									200	12.10	34.70		26.356	167.8	.623
									250	11.36	34.70		26.495	154.5	.706
									300	10.38	34.60		26.594	145.2	.784
									400	8.98	34.55		26.789	126.7	.927
									500	7.62	34.48		26.942	112.2	1.055
									600	6.81	34.48		27.056	101.3	1.170

RV ALEXANDER AGASSIZ

MUCCAUBER EXPEDITION

117

LATITUDE		LONGITUDE		PC/DAY/YR		PASSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
22 20.5N		111 07.3W		12/16/65		0144		GMT	3282M	360	11KT				
Z	T	S	C2	PC4	SIG3	NC2	NC3	DT	Z	T	S	O2	SIGT	DT	CC
									0	24.21	34.62		23.313	457.5	0
									10	24.20	34.62		23.316	457.2	.046
									20	24.17	34.61		23.317	457.1	.092
									30	23.83	34.57		23.387	450.4	.137
									50	18.60	33.85		24.264	366.8	.219
									75	15.97	33.74		24.806	315.1	.305
									100	13.83	33.93		25.416	257.1	.377
									125	13.22	34.40		25.903	210.8	.436
									150	12.62	34.45		26.061	195.8	.488
									200	11.78	34.67		26.394	164.2	.580
									250	10.83	34.60		26.514	152.8	.662
									300	10.03	34.57		26.631	141.7	.739
									400	8.80	34.55		26.818	123.9	.878
									500	7.63	34.50		26.956	110.8	1.004
									600	6.71	34.50		27.086	98.5	1.117

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		6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s)	8. CONTRACT OR GRANT NUMBER(s) N00014-75-C-0152	
9. PERFORMING ORGANIZATION NAME AND ADDRESS Scripps Institution of Oceanography La Jolla, CA 92093		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS Office of Naval Research Arlington, VA 22217		12. REPORT DATE 15 FEB. 1978
		13. NUMBER OF PAGES 106 pages
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		15. SECURITY CLASS. (of this report) Unclassified
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